Parents’ Priorities and Satisfaction With Acute Pediatric Care

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Objective: To identify parents’ priorities and satisfaction in relation to pediatric care to assess nurses’ and physicians’ ability to provide care and treatment that fulfill parents’ needs.

Design, Setting, and Participants: The study took place in the pediatric ward of a regional hospital in Denmark. It included 300 parents of children admitted for acute care, and the data were collected by means of a self-administered questionnaire. After admission, parents were asked about priorities. After discharge from the hospital, parents were asked to report their level of satisfaction with the elements of care they had received during their stay.

Results: A total of 253 questionnaires were returned for the first section (a response rate of 84%), and 170 questionnaires were returned for the second section (response rate of 67%). The greatest gap between priorities and satisfaction was in the waiting time related to admission, waiting time related to fulfillment of the child’s needs, and information given about care and treatment. Parents were most satisfied with the nurses’ behavior; however, physicians’ performance was given the highest priority score.

Conclusions: Parents’ priorities and assessments of inpatient pediatric care rest heavily on the communication between physicians and parents. The present study pointed to the need for improved and clearer communication. In addition, the poor performance with regard to waiting time indicates that this is a major area for improvement.

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The most important outcome of pediatric care is the improvement of the child’s health or reduction of symptoms. However, parents’ satisfaction is associated with such central outcomes, including adherence to the therapeutic regimen and understanding of medical information, that parents’ satisfaction with care can be considered a good proxy variable for some important aspects of quality of care. Unfortunately, until now, parental experience with pediatric inpatient care has not been carefully described. Study of the literature, however, identifies important problems in the quality of care, especially regarding the information available to and communication with parents.}

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Our study was a cross-sectional study in the pediatric ward of Kolding Hospital in Denmark. It took place during the months of January and February 2002.

Parents of children aged 2 months to 15 years who were admitted for acute care were enrolled consecutively when and if they arrived at the pediatric ward any day between 8 AM and 10 PM and if they were able to speak and understand Danish. The enrollment was not re-
arranged on a 5-point Likert scale, this time from very satisfied to very dissatisfied. The majority of responders saw most aspects of care as extremely important to not important at all.

**PROCEDURE**

Parents who were hospitalized with their child were given a self-administered questionnaire divided into 2 sections. The first section was to be filled in immediately at admission and included questions about previst priorities. The second section was to be filled in at discharge from the hospital, and in this part we asked the parents to report their level of satisfaction with the elements of care they had received during their stay. Parents who did not return the questionnaire were contacted by telephone 3 weeks from the day they had received it.

**QUESTIONNAIRE**

Based on several sources, including a systematic literature exploration of other studies about parent satisfaction with pediatric care and adult patients’ priorities and satisfaction with medical care, a structured questionnaire was designed for this study. Items from 13 identified studies about patient satisfaction were used. They represented 87 different questions, and from them we selected 36 for our questionnaire. Some exploratory interviews with parents of children in pediatric care also took place. The criteria for selection of questions were (1) relevance to the target group of the study, (2) use in several studies, and (3) use in exploratory interviews in the ward. The questions reflected 6 dimensions of service quality:

1. Access to care and treatment (8 items)
2. Information and communication related to care and treatment (10 items)
3. Information related to practical conditions (eg, showing parents around the ward) (3 items)
4. Physicians’ behavior (5 items)
5. Nurses’ behavior (6 items)
6. Access to service (4 items)

For each item, the parents were asked to assess what they found most important (section 1) on a 5-point Likert scale, from extremely important to not important at all.

In section 2 of the questionnaire, filled in after discharge from the hospital, the parents were asked to reassess the same 36 items, now for an evaluation of care. Again the answers were arranged on a 5-point Likert scale, this time from very satisfied to not satisfied. The questionnaire also included items on parents’ characteristics: age, sex, education, and baseline data. We made a pretest of the questionnaire in a pilot study that included 15 parents. Afterward, internal reliability tests analyzed if the questionnaire was able to measure parents’ priority and satisfaction in a useful way. Using the Cronbach α, the internal reliability of each of the 6 dimensions of care was measured with the purpose of determining to what extent the items in the questionnaire related to each other and of analyzing how accurate, on average, the estimate of the true score was, as measured in a population of subjects.

The Cronbach α score for the 6 dimensions ranged from .78 (physicians’ behavior) to .91 (nurses’ behavior). The scores for the sixth dimension (access to service) ranged between .44 (satisfaction) and .50 (priority). The distribution of responses was approximately normal.

**ANALYSIS**

To describe the parents’ priorities and satisfaction, the mean score of each item was calculated using scores from 1 to 5 on the rating scale. This pattern is illustrated in a scatterplot (Figure 1) and was analyzed by comparing the mean of the priority score with the satisfaction score of each item. Statistical analysis was carried out using SPSS statistical software (SPSS Inc, Chicago, Ill). Statistical significance was set at \( P<.05 \).

**ETHICS**

The purpose of the survey was explained to the parents. Anonymity was assured in a letter handed out to parents with the questionnaire. The Danish Scientific Ethical Committee approved the study.

**RESULTS**

**SAMPLES**

A total of 253 section 1 questionnaires were returned (a response rate of 84%), and 170 section 2 questionnaires were returned (a response rate of 67%). Table 1 lists the characteristics of the parents.

**PARENTS’ PRIORITIES**

The majority of responders saw most aspects of care as important. Table 2 indicates that the aspects valued most...
in the total sample of parents were questions and information relating to care and treatment. For example, the item “Find out what is wrong with the child” (number 4) has a mean score of 4.6, and since the maximum score is 5.0, it tells us that nearly all parents view this problem as their highest priority. Other items with a high mean score are “Taking care of the child’s pain if it is relevant” (number 8) and “Explanation of the diagnosis/problem” (number 5). Items on practical information such as “The nurses show you around the ward” and “The nurses tell you about the ward procedures” were the lowest priorities, with a mean score of 2.8 (Table 2).

### PARENTS’ SATISFACTION

As shown in Table 2, the lowest level of satisfaction was found for items such as “Waiting time in the ward for medical examination” (number 1; mean score, 3.0), “The child’s need has been taken care of, without waiting too long” (number 7), and questions related to information and procedures in the ward. The parents were most satisfied with the nurses’ behavior and information given by the nurses, but items such as “Being involved in the care and treatment” (number 14) and “The physicians are kind” (number 19) also got a high score among parents.

#### THE GAP BETWEEN PRIORITIES AND SATISFACTION

The relationship between priorities and satisfaction is illustrated in Figure 1 in a scatterplot. The vertical axis represents the priority mean score, and the horizontal axis is the satisfaction mean score. Items in the upper left corner demand special attention. Parents’ satisfaction with the items in this area is rather low, although these services are given high priority (eg, “Waiting time in the ward for medical examination” [number 1], “The child’s need has been taken care of, without waiting too long” [number 7], and “Information about what is going to happen over the next days” [number 10]).

Items placed in the lower left corner also have a lower satisfaction score, but those in this area are given even lower priority, which indicates agreement between satisfaction and priority (eg, “The nurses show you around the ward” [number 24], “The nurses tell you about the ward procedures”[number 26], and “The

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Priority Mean Score (n = 253)</th>
<th>Satisfaction Mean Score (n = 170)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Find out what is wrong with the child</td>
<td>4.6</td>
<td>3.7</td>
</tr>
<tr>
<td>8</td>
<td>Taking care of the child’s pain if it is relevant</td>
<td>4.6</td>
<td>3.7</td>
</tr>
<tr>
<td>5</td>
<td>Explanation of the diagnosis/problem</td>
<td>4.5</td>
<td>3.8</td>
</tr>
<tr>
<td>23</td>
<td>Understanding the physicians’ information</td>
<td>4.5</td>
<td>4.1</td>
</tr>
<tr>
<td>13</td>
<td>Possibility of getting reply to questions</td>
<td>4.5</td>
<td>3.9</td>
</tr>
<tr>
<td>16</td>
<td>Information about what to do if the same problem should occur after discharge</td>
<td>4.4</td>
<td>3.7</td>
</tr>
<tr>
<td>34</td>
<td>Understanding the nurses’ information</td>
<td>4.4</td>
<td>4.3</td>
</tr>
<tr>
<td>9</td>
<td>Information about what is going to happen right now</td>
<td>4.4</td>
<td>3.6</td>
</tr>
<tr>
<td>14</td>
<td>Being involved in the care and treatment</td>
<td>4.4</td>
<td>4.2</td>
</tr>
<tr>
<td>19</td>
<td>The physicians are kind</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>18</td>
<td>The physicians seem to be prepared</td>
<td>4.3</td>
<td>3.5</td>
</tr>
<tr>
<td>7</td>
<td>The child’s need has been taken care of, without waiting too long</td>
<td>4.3</td>
<td>3.3</td>
</tr>
<tr>
<td>22</td>
<td>My experiences are taken seriously by the physicians</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>11</td>
<td>Information about expected progress of the disease</td>
<td>4.2</td>
<td>3.4</td>
</tr>
<tr>
<td>28</td>
<td>Teaching parents to give their child medicine</td>
<td>4.2</td>
<td>3.9</td>
</tr>
<tr>
<td>6</td>
<td>Observing the child</td>
<td>4.1</td>
<td>3.8</td>
</tr>
<tr>
<td>10</td>
<td>Information about what is going to happen over the next days</td>
<td>4.1</td>
<td>3.3</td>
</tr>
<tr>
<td>29</td>
<td>The nurses are kind</td>
<td>4.1</td>
<td>4.4</td>
</tr>
<tr>
<td>33</td>
<td>The nurses take my experiences seriously</td>
<td>4.1</td>
<td>4.0</td>
</tr>
<tr>
<td>20</td>
<td>The physicians are able to express warmth and care</td>
<td>4.0</td>
<td>3.9</td>
</tr>
<tr>
<td>30</td>
<td>The nurses are able to express warmth and care</td>
<td>4.0</td>
<td>4.1</td>
</tr>
<tr>
<td>15</td>
<td>The nurses can handle outbursts of feelings</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>32</td>
<td>The nurses show teaching ability</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>31</td>
<td>The nurses show understanding for my needs</td>
<td>3.8</td>
<td>3.9</td>
</tr>
<tr>
<td>36</td>
<td>The ward can offer a balanced diet for my child</td>
<td>3.6</td>
<td>3.4</td>
</tr>
<tr>
<td>3</td>
<td>My child will be treated with medicine</td>
<td>3.6</td>
<td>4.1</td>
</tr>
<tr>
<td>12</td>
<td>My child will receive appropriate information</td>
<td>3.6</td>
<td>3.2</td>
</tr>
<tr>
<td>35</td>
<td>The ward can offer activities for my child</td>
<td>3.5</td>
<td>3.8</td>
</tr>
<tr>
<td>27</td>
<td>The nurses consider the child’s daily routines</td>
<td>3.3</td>
<td>3.4</td>
</tr>
<tr>
<td>25</td>
<td>The nurses inform you how to find things in the ward</td>
<td>3.1</td>
<td>3.3</td>
</tr>
<tr>
<td>24</td>
<td>The nurses show you around the ward</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td>26</td>
<td>The nurses tell you about the ward procedures</td>
<td>2.8</td>
<td>3.1</td>
</tr>
<tr>
<td>17</td>
<td>Your child is discharged the same day</td>
<td>2.7</td>
<td>3.7</td>
</tr>
</tbody>
</table>
nurses inform you how to find things in the ward” [number 25]).

NURSES’ AND PHYSICIANS’ ABILITY TO FULFILL PARENTS’ NEEDS

The differences in nurses’ and physicians’ ability to fulfill parents’ needs are illustrated in Figure 2. It shows 5 scatterplots of priority mean scores and satisfaction mean scores for 5 items related to behavior.

For items such as understanding the information, kindness, and taking the parents' experiences seriously, the physicians were given the highest priority score, indicating that from parents' point of view, it is most important that the physicians demonstrate this behavior. Although the result is not significant, the satisfaction score for the same 3 items was highest for the nurses, showing that the parents were most satisfied with the nurses' information (P = .06), kindness (P = .06), and ability to take the parents' experiences seriously (P = .29). Nurses' and physicians' ability to express warmth and care were given the same priority score, but again parents were most satisfied with the nurses' behavior (P = .04).

“The nurses show teaching ability” was the only item that was given the highest priority score in relation to the nurses, although it was not significant. Parents were also most satisfied with the nurses' behavior according to this item (P = .04).

This study shows that medical care and treatment as well as information about care and treatment are issues highly ranked by parents. The lowest levels of satisfaction were reported for waiting time, information about the ward, and information about procedures. Whereas parents were most satisfied with the nurses' behavior, items related to physicians were given the highest priority, except for showing teaching ability.

The response rates of 84% and 67% were considered acceptable for answering 2 anonymous questionnaires with 80 and 84 questions. It was possible to uncover some characteristics of the parents who did not reply to section 2 of the questionnaire because 72% of the parents who did not return this portion replied to section 1. An analysis of satisfaction scores according to parents' background data showed no significant difference between the group that replied and that which did not; that is, the results were not biased.

The questionnaires used in the study were based on information identified in several other studies of parents' needs, including our own exploratory interviews with parents of children in pediatric care. The large numbers of questions help elicit a broad perspective of patients' priorities. The items reflected all dimensions of service that may influence parents' satisfaction, including aspects of physicians' and nurses' behavior and information related to practical conditions. This means that the questionnaire can be regarded as a tool with content validity for the evaluation of needs in pediatric wards. The 6 dimensions of quality are very similar to the 7 dimensions used in a Swedish parent questionnaire developed from the Quality of Care Patient Questionnaire, an instrument showing good validity and reliability. In our questionnaire, the internal reliability of the 5 measurement indexes has been tested with the Cronbach α to be good, with an internal consistency of more than .78 in all but 1 index. According to the parents, most of the 36 aspects of care and treatment in the pediatric ward are important. This was expected because the aspects were selected according to their importance for parents.

The most important needs were those related to appropriate and accessible care and treatment as well as in-
formulation about care and treatment. The less important needs were those related to service-oriented areas. These results correspond with the results of other studies of adult patients’ priorities in health care.23 By analyzing not only parent satisfaction but also the relationship between priorities and satisfaction in response to the individual questions, it is possible to highlight special areas in need of attention.24 Apparently only Homer et al2 have considered both frequency and importance in their study of the quality of pediatric care; they point out communication with parents as the area of highest priority for improvement. The greatest gap between satisfaction and priority was in waiting time. This result is supported by another Danish study that shows that one third of patients are unsatisfied with waiting time.25 The pediatric physician in attendance often have to decide on priorities because he or she is responsible for both inpatients and children admitted for acute care. For the less ill patients, it often means waiting. Unfortunately, waiting time as a factor influencing satisfaction is an understudied aspect of health care.26 Compared with other services, parents rated the priorities of receiving information about the ward and information about procedures in the ward relatively low. These results are consistent with a Finnish study of medical and surgical wards.27

Figure 1 shows that the ward generally met the highest priorities of parents and appropriately paid less attention to those elements of care that parents cared less about. The question is whether this is the true picture or just an expression of the parents’ not being able to distinguish between satisfaction and priority. Analyzing the scores using the Spearman ρ shows that the correlation between priority score and satisfaction score is not significant (P = .41), indicating that there is no relationship between priority and satisfaction and that the parents are able to distinguish between them. However, our model still has the important limitation that when parents’ ratings are turned into scores, it is not possible to say that a priority score of 4 results in a satisfaction score of 4.

The differences in physicians’ and nurses’ ability to meet parents’ needs could be explained by the uneven distribution of men and women (52 men and 201 women) if there were a difference between men’s and women’s priority scores and satisfaction scores for doctors’ and nurses’ behavior. However, an analysis of the results shows that this cannot explain the differences.

As shown in other studies, contact with the physician is of great importance.28,29 Spending little time with the patients could be one of the reasons for physicians’ not being able to fulfill parents’ needs to the same degree as the nurses.

This study has pointed out the most important items related to pediatric inpatient care as seen from the parents’ point of view. Our method makes it possible to clearly distinguish between nurses’ and physicians’ ability to fulfill parents’ needs, and the results show important differences that can lead to further investigations and to more specific quality development. Waiting time and communication with parents emerge as the highest priorities for improvement.

**CONCLUSIONS**

**REFERENCES**