

Patient Satisfaction with a Patient-Centered Inpatient Care  
Delivery Program in a Rural Community Hospital

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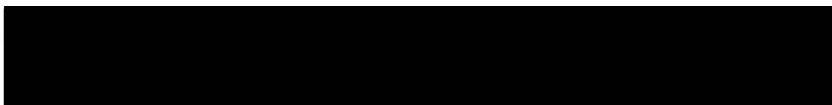
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## ABSTRACT

**TITLE:**        **Patient Satisfaction with a Patient-Centered Inpatient Care Delivery Program in a Rural Community Hospital**

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Key concepts of patient-centered care are examined. They include offering choices to empower and involve the patient, respectful and caring interactions, attentiveness to and advocacy of patient needs, patient teaching, and an environment conducive to relaxation.

A descriptive study examines patient satisfaction with a patient-centered care delivery program in a small rural community hospital. A sample of 15 adult non-intrapartum inpatients were interviewed using a tool developed by the investigator, after at least 24 hours of hospitalization. Five point Likert scale items, as well as open-ended questions, were used to assess patient satisfaction with a variety of program elements addressing the broad focus of this hospital-wide service delivery model.

The findings suggest that the program was not fully implemented as planned. However, patients expressed satisfaction with the program elements which they experienced. Items with lower satisfaction related to food selection, noise level and the extent to which medications were explained. Further study is warranted to identify elements which patients find important and which have the greatest influence on their satisfaction with care. Also consideration needs to be given to the barriers of program implementation.

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Community hospitals are struggling with the financial impacts of new health care reimbursement regulations. Health insurance coverage is more limited for inpatient care. Hospital stays have shortened and managed care participation has increased. The effects are exacerbated for rural hospitals due to the smaller population in service areas. Even small operating restrictions or modest patient admission reductions can result in hospital closings.

"Pressures resulting from competition, which always will be based partly on price, consumerism, and demand for accountability, have forced health care organizations to monitor consumer satisfaction," according to Meisenheimer (1992, p. 79). As a result, small rural hospitals have been developing new management strategies. One approach has been to develop a "patient-centered" delivery of care with an emphasis on more personalized, friendly service. While smaller hospitals may be at a disadvantage in providing a large range of services, they may compensate by offering a more personal approach (White & Lee, 1990). This is beneficial since higher consumer expectations have created a need to restructure the delivery of hospital care (Robinson, 1991). Meisenheimer (1992) states, "A paradigm shift from the medical model to a consumer-oriented approach to health care delivery is revolutionizing the way quality care is being defined and measured" (p. 79).

The purpose of this study is to examine patient satisfaction with a patient-centered care program in a small rural community hospital. The review of the literature addresses (1) patient satisfaction, (2) the components of patient-centered care programs, and (3) the implementation of a patient-centered care model in a rural Oregon hospital.

### Review of the Literature

#### Patient Satisfaction

Patient satisfaction is defined as the "patients' views of their care" (Bond & Thomas, 1992, p. 53). The extent to which patients' expectations are met is integral to their level of satisfaction. Risser (1975) defines satisfaction as an attitude reflecting the

amount of similarity between a patient's expectations and his perception of nursing care.

Steiber (1988) holds that the hospital must meet patients' expectations in order to preserve the patient's perspective of high quality care. As such, "consumer satisfaction, as a measure of quality, is now recognized as an expected outcome of care" (Meisenheimer, 1992, p. 79).

#### Patient-Centered Care Programs: Components and Their Relation to Patient Satisfaction

Patient-centered care can be defined as care planned and implemented with the patient as the focus, rather than the staff or facility. This is also referred to in the literature as the "consumer-oriented" approach.

A review of the literature suggests five basic components of patient-centered care that may influence patient satisfaction: (1) offering patients choices to increase feelings of control and involvement, (2) encouraging respectful and caring staff interactions, (3) being attentive to and advocating for patient needs, (4) teaching patients about their illness and treatment, and (5) producing an environment conducive to rest and healing.

#### Choice

Offering choices by primary care nurses and other health care providers has the goal of empowering the patient and family. "Even if there is no choice regarding medical treatment, patients are offered the chance to control other parts of their hospital environment" (Martin, et al., 1990). This will result in greater patient participation in their care and will enable the patient to feel a greater sense of control (Martin, et al., 1990).

Choice, as a component of a patient-centered care program, is not a discrete entity. Except for interaction, choices relate to all other components, which include elements that are (1) planned, and therefore pose opportunities for choices to be offered, or that are (2) integral to staff's rendering of services and therefore likely to be received by the majority of subjects.



Increased patient participation has also been linked with improved satisfaction.

"As patients become more involved with their own care, they also become more satisfied with the nursing they have received" (Davis-Martin, 1986, p. 25).

### Interactions

Respectful, caring and compassionate interactions of all hospital employees with patients become of paramount importance in patient-centered care (Martin, et al., 1990). Central to the Planetree philosophy is respect for the patient and enhanced communication (Martin, Hunt, Hughes-Stone, & Conrad, 1990; Jenna, 1986). Elements of this component include courteous and polite staff communication. The staff's efficiency while admitting the patient, responding to the call light, or expediting the radiological process are other examples of the interaction component of the patient-centered model.

The interaction skills of staff have been more closely linked with satisfaction than technical skills (Press, Irwin & Ganey as cited in Patten, 1994). "Many patient and family concerns focus on what was said and how it was said and not necessarily on the clinical aspects of care," according to Patten (1994, p. 80A).

Interactions may also increase satisfaction when healing is promoted through "mind/body medicine". This addresses the influence of feelings and thoughts on the healing process; Sabatino (1993) states,

In an era of patient-centered care, the field of mind/body medicine seeks to enlist a patient's own attitudes and emotional resources to promote healing. Recognizing that a personal, caring dimension is often as important to a patient's handling of the disease process as the technology and medical expertise he or she will receive, mind/body medicine places a strong emphasis on using both the patient's family and friends and a supportive environment to promote the healing process. (p.

8)

### Attentiveness

Attentiveness, another component of patient-centered care, refers to the willingness of an organization and staff to serve patients. Staff advocate for patients to ensure that their needs are met (Martin, Hunt, Hughes-Stone, & Conrad, 1990; Jenna, 1986). Activities and services are planned in response to patient needs (Robinson, 1991). Petersen (1989) views every contact with a patient as an opportunity to improve patient satisfaction by having the caregiver ask the patients to identify their needs. The caregiver can then plan care to be certain that needs are met. Examples of the attentiveness component include providing privacy for the patient, ensuring that special needs and requests are met, and being attentive when providing a service.

Being attentive to patient's feelings and needs is not a new concept to health care. It is included in the 1959 National League for Nursing's Patients' Bill of Rights (as cited in Davis-Martin, 1986).

### Teaching

Teaching, the fourth component, has a dual benefit in a patient-centered care setting. Patient education and involvement can be seen as a fundamental right and therefore complete access to information should be available to all patients (Jenna, 1986; Martin, et al., 1990). Patients are encouraged to become "true partners in their care" which can result in greater compliance with medical treatment (Weber, 1992, p. 32; Sabatino, 1993). It is hoped that knowledge about prevention and self help strategies will result in healthier long term outcomes (Jenna, 1986; Martin, et al., 1990; Planetree Health Resource Center, 1991). Another goal of patient teaching is to empower the patient to be involved in his own care and treatment (Gibson & Pulliam, 1987). Self medication is also offered as an option in some patient-centered care models (Gibson & Pulliam, 1987; Planetree Health Resource Center, 1991). Some patient-centered units use a health educator to provide patients with "fact sheets" on their diagnoses,

medications, tests, and procedures. A book cart circulates among some hospital units while others have a resource library (Jenna, 1986).

Teaching encompasses family members as well. Their participation in patient care and emotional support is also strongly encouraged. This is facilitated by open visiting hours and encouraging overnight stays. Helping families to learn and to assume care prior to the patient's discharge is stressed (Gibson & Pulliam, 1987; Jenna, 1986; Martin, et al., 1990).

While the literature on patient-centered care has limited references explicitly linking teaching with improved patient satisfaction, teaching has been found to positively affect satisfaction. Seguin, Therrien, Champagne, & Larouche (1989) found that satisfaction with medical services during childbirth was mainly related to the patient's "participation in the decision-making process and to the frequency of explanations they receive" (1989, p. 113).

### Environment

Providing an environment conducive to healing is the fifth, and last, component of patient-centered care. A comfortable and nurturing setting is developed with entertainment and art, and is geared to the patient rather than to the convenience of the health professional (Jenna, 1986; Baltus, 1992; Martin, et al., 1990).

Although patient-centered care models often place an emphasis on physical environment, studies are limited to support the assumption that a home-like environment leads to increased patient satisfaction. One study, while not controlling for a patient-centered delivery of care, revealed that some elements rating high in terms of patient satisfaction were not highly correlated with perceptions of quality (Steiber, 1988). Steiber reports the findings of a SRI Gallup/Hospital nationwide poll of 414 respondents who had either been hospitalized themselves or had immediate family members hospitalized within two years of the poll. His results show satisfaction ratings were highest for cleanliness, physician care, and nursing care, respectively, though a patient's rating of quality of care

was correlated highest with concern from staff, nursing care and physician care, respectively. Therefore, while cleanliness met with the highest level of satisfaction, it was not strongly correlated with perceptions of quality. Similarly, room appearance rated high in terms of patient satisfaction but had a low correlation with quality of care. Steiber (1988) states, "The single most important action hospital executives can take to maintain quality from the patient perspective is to deliver a satisfactory experience," which he states is done through meeting the patient's expectations (p. 84). The patient-centered care model emphasizes creating a home-like setting; however, considering Steiber's research, questions may be raised as to the effectiveness of manipulating the physical environment, beyond high standards of cleanliness, to improve patient satisfaction.

While anecdotal references are made regarding the relation of patient-centered care to improved patient satisfaction, the effect has not been extensively measured. Many studies have examined patient participation and satisfaction as they relate to physician interaction, nursing care, or treatment decisions (Chang, 1980). However, since the patient-centered approach requires a change in the service delivery of all hospital personnel, rather than nursing alone, research is needed from a broad-based concept of patient-centered care as implemented by an entire health facility.

#### Implementation of a Patient-Centered Care Model in a Rural Oregon Hospital

The focus of this study is a small 18 acute bed rural hospital which serves a community of 5,000 with a catchment of 9,000. The estimated average daily census is four to five inpatients. The estimated average length of stay is three days.

Competition is mainly from a 125 acute bed hospital 25 miles south and a 409 acute bed hospital 100 miles northeast. In 1989, 52% of the 1,125 acute care hospital patients left the area for healthcare (LHS Management Company, 1991). During the past four years, the amount of care provided by the community hospital has increased due, in part, to the creation of a specialty clinic.

In March, 1994, a patient-centered, hospital-wide approach to giving personalized service was adopted. Many of the components are based on the Planetree model. The key concept of Planetree, a pioneering patient-centered care program created in 1978 as a result of a patient's resolve to improve hospital care, lies in the belief that the patient is a consumer and, as such, a participating member of the health care delivery team (Martin, Hunt, Hughes-Stone, & Conrad, 1990; Jenna, 1986). The hospital's objective was to increase patient satisfaction, and thereby increase the hospital's market share. The hospital mission statement was revised to reflect a patient focus. Three choices, dietary selection, kitchenette use, and timing of personal care, were implemented at the program's inception in 1994.

Various departments of the hospital are charged with implementing the program elements. These elements operationalize the five components of the patient-centered model: choices, interactions, attentiveness, patient teaching, and environment. All staff are inserviced on the program. Departments develop and implement elements which address the program's goals so that patient-centered care is the delivery pattern of all hospital employees.

Many choices are offered to patients within the program. These include the opportunity for a review and explanation of the medical chart by the nurse. In addition, the patient is to be offered choices regarding diet, times for housekeeping services and sensitivities to cleaning supplies, and timing of daily care. The nurse informs the patient and family of the availability of music and video tapes and the use of the unit's kitchenette.

All patient interactions, including admitting, radiology and laboratory, are expected to be carried out in a respectful and caring manner. The efficient and timely provision of services, such as admission, response to the patient call light, and radiology, also demonstrate respect and regard for the individual patient.

Attentiveness refers to the response to patient needs and requests. It also includes attention given to the patient during the admission process, altering the use of cleaning products by housekeeping in response to a patient's sensitivities, and ensuring privacy.

An example of the patient teaching component is the primary nurse's orientation of the patient to the patient-centered care program. She is to explain the program philosophy and acquaint the patient with hospital routines. If the patient expresses an interest, the protocol directs the nurse to review the chart, doctor's orders and tests. The nurse is directed to provide teaching on the patient's diagnosis and preoperative teaching is to be offered by the surgical nursing staff.

Efforts at promoting an environment conducive to healing include the upkeep of patient equipment, such as television, phones, bed, call button and lights and the use of pagers by the maintenance staff rather than the overhead intercom to reduce noise. Physical changes to promote a more home-like atmosphere have included floral sheets, patient robes, and access to the unit's kitchenette. Patients are offered the use of music and video tapes to aid in relaxation.

### Research Questions

The aim of this study is to examine, through the use of a descriptive survey, the implementation of this patient-centered care program and to assess patient satisfaction with the program elements. The research questions addressed are: (1) To what extent were patients offered the choices of the program? (2) How satisfied were patients with the program components they experienced? (3) What do patients' comments suggest for improving services?

### Methods

#### Subjects

The subjects in this study were the first fifteen patients hospitalized during the study in January, 1996 who met the following criteria: (a) non-intrapartum inpatient, (b) age 18 years or older, (c) a hospitalization of at least 24 hours, and (d) mental alertness.

Original subject criteria included a length of hospitalization of at least 30 hours to ensure that subjects experienced all three nursing shifts and to allow for completion of initial admitting, laboratory and radiological services. However, after the first week, this was lowered to 24 hours. Subjects too ill to participate were interviewed after the more acute phase of their illness or injury.

Sixty percent of the subjects were female. The age range was from 27 to 80 years, with two thirds between the age of 62 and 80, with a median of 70. Four subjects were interviewed following 1 to 1.5 days of hospitalization, six following 2 to 2.75 days, and five following 3 to 7 days, with a mean of 2.7 days. Five subjects reported on their experience as Intensive Care Unit (ICU) patients.

One patient meeting the sample criteria declined participation. Forty six patients did not meet the sample criteria: two intrapartum patients, two newborns, 29 admitted for outpatient holds or day surgery, and thirteen with impaired cognition or a hospitalization of less than 24/30 hours, or both. Because of confidentiality, little demographic information was available; for the group of thirteen, the median age was 77 and 62% were female.

### Instrument

The research questionnaire (Appendix A) is an interview schedule that requires 30 minutes to administer and includes demographic, Likert, and open-ended items. Four demographic items, age, gender, diagnosis, and ethnicity, describe the subject. Two items, the admission and interview date and time, address the 24 hour minimum stay sample criterion.

Eight dichotomous items ascertain whether the subject received a choice of diet, chart review, timing of daily care and housekeeping service, cleaning supplies, music, video tapes, and use of the kitchenette (Table 1).

Thirty one items, listed in Table 2, relate to the operationalization of the remaining four components of the patient-centered model: interaction, attentiveness, teaching, and

environment. Seven items address the interaction component, querying satisfaction with the politeness and efficiency of the admitting, nursing, laboratory and radiology staff. Eleven items measure satisfaction with attentiveness elements, such as the provision of privacy and the efforts made towards meeting individual needs. The measure evaluates the patient teaching component through the responses to nine items, dealing with explanations of the subject's illness or injury, medications, vital signs, hospital routines and special dietary restrictions. The measure has four items addressing the environment, i.e., noise, the effects of music and video tapes to improve relaxation, and the working condition of the television, bed controls, telephone and call light. A five point Likert scale measures the subject's degree of satisfaction; five reflects the highest response for satisfaction.

Elements were assigned to components based on the investigator's knowledge of the literature. An item analysis was not done, though a test of internal consistency would have been beneficial to ensure the reliability of the tool.

The tool has three open-ended questions in addition to an area to record comments in each section. The open ended questions encourage the patient to make comments which may help improve services in the areas of environment, housekeeping, maintenance, nursing care, and in general. These comments may relate to any of the five program components.

The investigator developed the tool and pretested it with a convenience sample of two males, aged 46 and 71, and one female, 68. Their level of education ranged from 10 to 18 years and they had recent exposure to health care. They were asked to identify statements which were unclear; they also offered items for inclusion which they felt were important to assessing their level of satisfaction with their recent health care experience. The pretesting resulted in more explicit wording of the tool and the addition of items relating to problems with a roommate and special dietary requests.



### Procedures

Each day of the study, the Assistant Director of Nursing Services (ADNS) noted the previous day admissions. The patients who met the study criteria were invited to participate by the ADNS. Using her professional judgment, the ADNS identified and excluded from the study cognitively impaired patients and those too acutely ill. The latter she invited to participate following the acute stage of their illness. The ADNS coded patients whom she excluded from the study on the Research Project Exclusion Tally Form (Appendix B).

The ADNS explained that participation was strictly voluntary and no negative effects would be associated with nonparticipation. One patient chose not to participate. The ADNS obtained a signed consent (Appendix C) for all participants. Over one weekend a registered nurse, following study protocol, assisted in obtaining consents.

The ADNS left the signed consents for the investigator who interviewed the subjects in the hospital room in the evening. The investigator first confirmed the subject's willingness to participate and stated that responses were confidential with results being disseminated in summary form at the end of the study. Secondly, the investigator reviewed the study's purpose and usefulness. The investigator also advised the subject that the interview could be stopped if the subject became fatigued. The investigator kept the signed consents and completed questionnaires under lock .

To control for intercoder reliability and to standardize the approach used with subjects, the investigator was the only interviewer (Petersen, 1989).

### Analysis and Results

Data were quantified using descriptive statistical analysis, including counts, means, modes, medians and standard deviations. Data were excluded from subjects who did not recall, or for whom the element was not appropriate.

The first research question dealt with the percentage of choices offered to patients in the program. The question was addressed in three ways. First, affirmative responses to

the eight choice elements surveyed were summed to determine the frequency of offerings across all subjects. These responses were then compared to the total number of possible choices. On six occasions a subject could not recall whether an offer was made; these data were excluded from the total. As illustrated in Table 1, of the 114 recalled choices across all subjects, only 40% were offered.

The second analyses involved an examination of the number of choices offered to individual subjects. Overall the proportion was very low with a range of 0 to 6, out of a possible 8. The mean number of choices offered was three, with a standard deviation of 1.73.

In the third analyses, the percentage receiving each choice, compared to the number recalling the choice offerings, was calculated. As summarized in Table 1, only three of the eight choices: availability of the kitchenette, timing of personal care, and choice of foods, were offered to fifty percent or more of the subjects. The percentage was quite variable, ranging from 2% (cleaning supplies, review of medical record, and time of room cleaning) to 87% (choice of foods).

Table 1

Percentage of Subjects Offered "Choices" by Element of Choice

Component	Element Description	Available for Analysis	Offered Element	
		n	n	%
Attentiveness	food selection	15	13	86.67
	timing of personal care	14	7	50.00
	cleaning sensitivities	12	2	16.67
	timing of room cleaning	14	2	14.29
Teaching	medical chart review	14	2	14.29
Environment	kitchenette use	15	8	53.33
	video tapes	15	7	46.67
	music tapes	15	5	33.33
Total Patient Choices		114	46	40.35

Note. The Available for Analysis n is the number of subjects who had recall.

Research Question #2 explored the level of patient satisfaction with four of the five program components and the elements within each component. The overall satisfaction with the program was also examined.

The reasons why subjects did not experience program elements are summarized in Table 2 and delineated as (1) not recalled, (2) not applicable, (3) declined, and (4) not offered. An example of an item which was not applicable is the call light for ICU patients, because there are no call lights in ICU. An example of a declined item is the chart review refused by a subject who was offered a review.

Mean satisfaction was calculated by summing each item score across all subjects and dividing by the number of subjects responding; those not experiencing program elements were excluded from analysis. Component means for interactions, attentiveness, teaching, and environment were calculated by summing the means for each item relating to the component and dividing by the number of items. Standard deviations were also calculated.

As illustrated in Table 3, the satisfaction means for the four components were high, ranging from 4.36 to 4.57. Satisfaction scores were highest for interactions and attentiveness, followed by teaching, and environment. It should be noted that six item means are unstable due to the small number of respondents. They are excluded from the range of values, however, they are included in the mean calculation.

All interaction elements had high satisfaction scores, with the politeness of the admitting clerk scoring the highest. The quickness of the call light response element had the lowest score among elements in this component.

Attentiveness items ranged from 3.39, for food selection, to 4.83, for the attentiveness of the admitting clerk. Satisfaction with the food selection received the lowest score on the instrument.

Satisfaction scores for patient teaching ranged from 3.80 for the explanation of medication to, 4.50, for the explanation of a special diet, with the former score also having a high degree of variability.

Satisfaction scores for the environment component ranged from 3.40, for noise level, to 4.67, for the functioning of the TV/phone/bed/call/lights. While seven subjects were aware of the audio and/or video tapes, only one used them while hospitalized.

The mean overall satisfaction, 4.47, was computed by summing the means of the four components and dividing by 4. The standard deviation was 0.11.

Table 2  
Subjects Not Experiencing Program Elements by Reason

Component	Element Description	No Recall n	Not Applicable n	Declined n	Not Offered n	Total n
Interactions						
	admitting time	1	3 <sub>a</sub>	0	0	4
	politeness of admitting clerk	1	1 <sub>a</sub>	0	0	2
	politeness of nursing staff	1 <sub>b</sub>	0	0	0	1
	call light response	0	5 <sub>c</sub>	0	0	5
	politeness of lab personnel	1	0	0	0	1
	time required for x-ray	0	1	0	0	1
	politeness of radiology	0	1	0	0	1
		4	11	0	0	15
Attentiveness						
	admitting clerk attentiveness	2	1 <sub>a</sub>	0	0	3
	roommate problem	0	15	0	0	15
	privacy of room	0	0	0	0	0
	cleaning time	0	0	0	13	13
	cleaning sensitivities	1	0	0	13	13
	nsg procedure privacy	1	0	0	0	1
	nurse attentive to needs	0	0	0	0	0
	personal care timing honored	1	0	0	8	9
	food selection	0	0	0	2	2
	special dietary requests/needs	1	0	8	0	9
	privacy during x-ray	1	1	0	0	2
		7	17	8	36	68

Table 2 continued  
Subjects Not Experiencing Program Elements by Reason

Component	Element Description	No Recall n	Not Applicable n	Declined n	Not Offered n	Total n
Teaching						
	hospital routine explanation	0	0	0	3	3
	illness/injury explanation	0	0	0	4	4
	medication explanation	0	0	0	0	0
	questions answered clearly	0	0	0	0	0
	vital signs results	0	0	0	3	3
	special diet explanation	1	5	0	0	6
	medical chart review	0	0	1	13	14
	preop explanation	1	11	0	0	12
	answers to surgical questions	1	11	0	0	12
		3	27	1	23	54
Environment						
	noise	0	0	0	0	0
	music tapes aid relaxation	0	0	5	10	15
	video tapes aid relaxation	0	0	6	8	14
	TV/phone/bed/call/lights	3	0	0	0	3
		3	0	11	18	32
Totals		17	55	20	77	169

Note.

a = admitted through emergency room; b = declined to answer; c = not available in ICU.

Table 3

Mean Satisfaction with Program Elements

Component	Description of Items	Available for Analysis n	Mean	SD
Interactions			4.57	0.22
	admitting time	11	4.73	0.47
	politeness of admitting clerk	13	4.81	0.44
	politeness of nursing staff	14	4.39	1.00
	call light response	10	4.20	1.14
	politeness of lab personnel	14	4.46	0.84
	time required for x-ray	14	4.71	0.47
	politeness of radiology	14	4.68	0.54
Attentiveness			4.57	0.48
	admitting clerk attentiveness	12	4.83	0.39
	roommate problem	0		
	privacy of room	15	4.20	0.68
	cleaning time	2	5.00 <sub>a</sub>	0
	cleaning sensitivities	1	5.00 <sub>a</sub>	0
	nsg procedure privacy	14	4.64	0.93
	nurse attentive to needs	15	4.47	0.96
	personal care timing honored	6	4.75	0.42
	food selection	13	3.39	1.10
	special dietary requests/needs	6	4.75	0.42
	privacy during x-ray	13	4.69	0.48



Table 3 continued

Mean Satisfaction of Program Components

Component	Description of Items	Available for Analysis n	Mean	SD
<hr/>				
Teaching			4.39	0.42
	hospital routine explanation	12	3.96	1.45
	illness/injury explanation	11	4.25	1.29
	medication explanation	15	3.80	1.78
	questions answered clearly	15	4.33	1.11
	vital signs results	12	3.96	1.51
	special diet explanation	9	4.50	1.06
	medical chart review	1	5.00 <sub>a</sub>	0
	preop explanation	3	5.00 <sub>a</sub>	0
	answers to surgical questions	3	4.67 <sub>a</sub>	0.58
<hr/>				
Environment			4.36	0.85
	noise	15	3.40	1.15
	music tapes aid relaxation	0		
	video tapes aid relaxation	1	5.00 <sub>a</sub>	0
	TV/phone/bed/call/lights	12	4.67	0.62
<hr/>				
Overall satisfaction			4.47	0.11

Note. The Available for Analysis n is the number of subjects who had recall, experienced the element, and responded to the query; a = unstable value due to small n.

Research Question #3 related to patients' comments for improving services. It was addressed by the responses to the open-ended questions in the instrument and by comments offered by subjects when responding to the Likert items. Identified themes are detailed in Table 4; only themes expressed by at least two subjects were included. While the open-ended questions were framed in such a way as to elicit suggestions for improvement, 77% of responses were negative. Comments were grouped by program with interaction and attentiveness components combined, as comments could apply to both.

Comments relating to interaction/attentiveness totaled 15 with 53% being of a negative nature. Comments relating to environment totaled 11; all were negative.

Six subjects made comments regarding noise. Even though the building is undergoing construction, the noise which subjects found annoying was talking in the corridors, a teaching activity, and food and trash carts.

When subjects were asked their satisfaction with the extent of explanation given by nurses, i.e., with medications, hospital routine, illness/injury and the results of vital signs, five patients remarked that, while the information was not spontaneously offered, they did receive answers after they questioned the nurse.

Two themes are not listed in Table 4 as they do not relate to program components. These are (1) negative comments by four subjects about the appropriateness of the food offered, temperature, and taste, and (2) comments offered by two subjects reflecting their belief that the community needs to increase its support of the hospital.

Table 4

Patient Comments Relating to Program Components

Program Component	Theme of Comments	Responses Positive Negative		
		n	n	n
Attentiveness/Interactions	Reports of ICU nursing	3	3	0
	Reports of nursing	6	4	2
	Positioning for radiology	2	0	2
	Patient room door not closed	2	0	2
	Rough lab technician	2	0	2
<u>Total Attentiveness/Interactions Comments</u>		15	7	8
Teaching	Information given only if patient asks	5	0	5
<u>Total Teaching Comments</u>		5	0	5
Environment	Noise level	6	0	6
	TV functioning	3	0	3
	Cleanliness of room	2	0	2
<u>Total Environment Comments</u>		11	0	11
<u>Total Comments</u>		31	7	24

Note. Only thematic comments which were stated by at least two subjects are included.

Attentiveness and Interaction components were combined as most comments pertained to both.

## Discussion

The purpose of this study is to examine the extent to which patients experienced and were satisfied with the components of a patient-centered care model: choices, interactions, attentiveness, teaching, and environment. This discussion first addresses the choice component and then the remaining four components. Strengths and limitations of the research along with suggestions for future research and practice are presented.

### Choice Component

This study found that less than half of all choices were offered to subjects. This indicates that the program is not fully implemented. Given the urgency of the competitive market, efforts towards wider implementation would be desirable. One option could be providing additional staff inservice focusing on the goals and expected outcomes of the patient-centered program. However, study is first needed to explore the barriers to program implementation. These may include a staff perception of insufficient time, or the appropriateness of some choices under certain conditions, such as ICU. Perhaps assumptions are being made by staff, in regards to previously hospitalized patients and their knowledge of hospital routines and unit resources such as the kitchenette, or music and video tapes.

The three choices most frequently offered, dietary selection, kitchenette use, and timing of personal care, were elements implemented at the program's inception in 1994. The remaining five items were new choices which had been introduced only six months prior to this study. This suggests that it may take an extended time for elements to be operationalized by the staff.

A secondary analysis looked at the length of stay and the likelihood of choices being offered. However, the mean number of affirmative responses to choice offerings did not correlate significantly with the length of hospitalization ( $r = .09$ , with an  $\alpha$  level of .01).

### Interaction, Attentiveness, Teaching, and Environment Components

The second research question examined patient satisfaction with four of the five program components and the elements within each component. The following discussion focuses on each component.

Interaction elements have apparently been operationalized throughout many hospital departments. Patients consistently expressed satisfaction with the polite and efficient manner in which staff in admissions, nursing, laboratory and radiology provided services.

Subjects most frequently commented on elements relating to the attentiveness and interaction components. This emphasizes the relative importance of interpersonal elements to patient satisfaction. This is especially salient in light of the fact that patient-centered programs place a strong emphasis on environmental modifications to enhance comfort and relaxation, in addition to caring and attentive interactions. But what aspects of hospital care are most important to patients and which elements of care influence their satisfaction the most?

Two findings which relate to the teaching component raise concern. First, a premise of patient-centered care is the promotion of patient education and subsequent involvement. However, one third of the subjects indicated that they generally received information only after they initiated the inquiry. Secondly, satisfaction with the extent to which nurses explained medication was among the lowest in the measure. However, there is a large variance from the mean with the frequency distribution skewed left. While most patients were satisfied or very satisfied with this element, several were very unsatisfied. It is a basic tenet of nursing education that nurses should provide explanations about medications and ways in which drug effectiveness can be improved and complications be alleviated. Furthermore, "To be informed of the drug's name, purpose, action and any possible adverse side-effects" is a patient's right according to the Patient's Bill of Rights (as cited in Kozier, Erb & Olivieri, 1991, p.1266). Therefore efforts should be directed at

exploring why patient education is not being consistently offered to all patients, and plans to operationalize this element of the patient-centered program should be put into place.

Measuring patient satisfaction with the surgical staff's preoperative teaching was inadequate in this study for two reasons. First, few subjects experienced this element which resulted in the very small sample size. Secondly, it was not certain whether subjects were evaluating preoperative teaching by surgical nursing staff or by the surgeon and nurse anesthetist.

Other issues of patient education which could be researched include the relationship of patient involvement. Only two subjects, in responding to this question, stated they were offered explanations about their medical chart, and ten stated that they would not be interested in having the chart reviewed with them. Questions could be raised around the extent that patient participation leads to greater compliance with treatment interventions which then may result in improved outcomes and secondary satisfaction.

Environmental elements did seem to be important to patients. The noise level rated among the lowest scores for satisfaction and received the most comments offered by subjects. Therefore, the facility may consider focusing future efforts towards interventions which reduce noise, especially in corridors.

Patient-centered models call for a home-like setting (Gibson & Pulliam, 1987). Some hospitals have embraced this with remodeling patient rooms to look less institutionalized and changing nursing stations into open work areas for patients and families (Jenna, 1986). While these elements were not studied by the investigator since they had not been implemented in the model under review, satisfaction with the availability of the kitchenette could have been queried. More study is indicated to ascertain the relative importance of environmental elements, prior to the expense incurred by substantial remodeling to create a more home-like setting, especially in light of the low correlation, found by Steiber (1988), between room appearance and quality of care.

Other environmental elements relating to art and entertainment and the extent to which they increase patient comfort and relaxation also need study. Since subjects were not exposed to music and video tapes during the time of this study, these elements could not be assessed.

This study dealt with satisfaction relating to dietary service only with the choice of selection, satisfaction of the selection and satisfaction with the extent to which special dietary requests were met. However, due to the four additional comments received about the food served, including taste, temperature, appropriateness, and serving sizes, it may be concluded that this was an area which affected the patients' perception of hospital services and as such should be given further consideration when planning activities geared toward improving patient satisfaction.

Satisfaction scores on program components ranged from 3.39 to 5.0, comparing favorably with other studies. In Risser's (1975) study of patient satisfaction of nursing care in primary care settings, scores ranged from 1.58 to 3.64. Another study gave patient satisfaction scores with all-registered nurse care of 3.08 to 4.26 (Hinshaw, Scofield, & Atwood, 1981). Another, which rated patient satisfaction with a number of aspects of hospital stay, had a range from 3.39 to 4.55 (Steiber, 1988). The usefulness of a single study of satisfaction, without the benefit of a historical comparison, is limited. However, repeated measurements would aid in determining the extent of program implementation over time and would provide on-going monitoring of patient satisfaction.

The time at which a subject is queried about satisfaction may affect the response (Bond & Thomas, 1992). Therefore, a secondary analysis was done on the relationship between the length of stay and satisfaction. This revealed that there was a negative correlation between length of stay and patient satisfaction with the interaction, attentiveness, and teaching components, -.46, -.57, and -.56 respectively, with an alpha level of .05. This could be misleading as the correlation was not significant when an

outlier was removed from the analysis. Thus, further study of the effects of length of stay on patient satisfaction is indicated.

The average satisfaction scores for subjects in ICU tended to be higher for all components as compared to unit patients; however, the size of the sample was not large enough to test for statistical significance. Further study of satisfaction with ICU patients compared to unit patients may reveal the relationship to satisfaction of such variables as lower patient to nurse ratio and frequency and intensity of nursing interventions. This may offer insights on the possible effects of varying staffing levels and nursing skill level on patient satisfaction. Additionally, the fact that hospital stays are shorter than in the past and the acuity of patients is greater needs to be further examined in relation to patient satisfaction.

#### Strengths and Limitations

Two strengths of this study can be attributed to the design. First, through personal interviews, the respondent was engaged in the questions and additional information was elicited with probes. Interviewing subjects while they are hospitalized may lead to biased responses as subjects may be reluctant to share negative viewpoints and may be uncritically loyal to their caregivers (Davis-Martin, 1986). However, the investigator, by stating she was not employed by the facility, attempted to reduce this effect. A mailed questionnaire was not used because of bias which may be introduced due to the reduced response rate expected from a mailed survey (Polit & Hungler, 1995).

Secondly, the amount of program implementation was analyzed through different types of questions. The result was a more thorough understanding of the extent to which subjects experienced the program and their level of satisfaction with it.

The non-experimental design, however, is also a limitation of the study. While the purpose of this research was not to study causal relationships, knowing whether elements of patient-centered care cause increased patient satisfaction would be helpful to those allocating hospital resources.



The small sample size limits this study by restricting the ability to do inferential statistical tests (Polit & Hungler, 1995). A larger sample size would allow for ANOVA testing of subjects in subgroups such as the ICU and surgical patients and would lend itself to a chi-square test of the relationship between length of stay and level of satisfaction. With a larger sample size, a multiple linear regression could be done to examine the effect of individual items with overall satisfaction. Additionally, future studies could look at the longitudinal effects of more complete program implementation.

The scales have not yet been tested for internal consistency or reliability. Because an item analysis was not done for the assignment of elements to components, the total component scores are more tentative than individual item scores and must be used with caution. However, it is unlikely that assignment of items to a different component would result in a significant difference in component satisfaction scores as they were very similar across items.

A study of content validity would be helpful to ensure that all elements which are important to subjects are included in future studies. During pretesting, the investigator queried the test subjects about issues of patient importance. The items relating to problems with a roommate were added to the tool as a result. However, no subjects experienced problems with a roommate, though this item may take on greater importance with a larger sample size and/or with longer lengths of stay.

#### Implications for Other Hospitals

In the absence of empirical data on the effect of patient-centered care elements on patient satisfaction, institutions may benefit from preliminary surveys seeking to identify those elements which will have the greatest likelihood of positively impacting patients' perception of their care. Additionally, prior to, and in conjunction with, the adoption of such a program, careful consideration should be given to the barriers to full implementation.

### Summary

Key concepts to patient-centered care include respectful and caring interactions, attentiveness to patient needs, and patient teaching. The patient, as a consumer and a participating member of the health care delivery team, is empowered through choices, education, information, and involvement. This descriptive study examines patient satisfaction with a patient-centered delivery of care program in a small rural community hospital. Patient satisfaction with a variety of program elements is studied in order to address the broad focus of a hospital-wide service delivery model. The extent to which patients were offered the elements of the program, their level of satisfaction with these elements, and their suggestions for improving services are examined.

Eight dichotomous items ascertained the number of choices experienced by the 15 subjects, following at least 24 hours of inpatient care. The study revealed that the program was incompletely implemented. Satisfaction ratings using a five point Likert scale showed a relatively high overall satisfaction with hospital services surveyed. It was concluded that when the elements of the program were implemented, the program appeared to perform well in positively affecting patient satisfaction.

Further study is needed to address the relative importance of patient-centered care elements in improving patient satisfaction, barriers to the implementation of these elements, and the effects of other variables such as length of stay and acuity on patients' perception of hospital services. This would enable administration to prioritize the use of resources to promote the variables of greatest significance to patients' satisfaction.

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## Appendix A

## Inpatient Satisfaction Research Questionnaire

Demographic Information (Relates to patient to be interviewed)

Date of birth \_\_\_\_\_ Gender: M/F City of residence \_\_\_\_\_ Private/Semi-Private Rm

Primary diagnosis \_\_\_\_\_ Ethnic affiliation \_\_\_\_\_ First time as patient yes/no

Admission Time &amp; Date \_\_\_\_\_ Time &amp; Date of interview \_\_\_\_\_

The following services were utilized by the patient this hospitalization:

\_\_\_\_ Ambulance \_\_\_\_ Surgery \_\_\_\_ ICU \_\_\_\_ Laboratory \_\_\_\_ Radiology \_\_\_\_ ER

Investigator's note: All questions relate to this hospitalization. The investigator will direct the patient to rank his/her level of satisfaction with the factor in question as: very unsatisfied (1), unsatisfied (2), neutral (3), satisfied (4), or very satisfied (5) and will be given these responses on an answer card for ease of answering. The investigator will circle the corresponding number across from the item. The line next to "Comments" is for recording the patient's words and is not scored. The Partners in Care elements have been grouped into five main categories labeled as following: Interactions (I), Attentiveness to Patient Needs (A), Environmental (E), Choices (C), and Teaching (T). These letters at the end of each item indicate the category in which the item will be analyzed.

I. Business Office "Concerning your admission process, how satisfied were you with:

(The phrase "how satisfied were you with" will be repeated at the beginning of items #1-3.)

1. the time it took to be admitted (before going to your room)..... 1 2 3 4 5 (I)

2. the politeness of the admitting clerk..... 1 2 3 4 5 (I)

3. the attentiveness of the admitting clerk" ..... 1 2 3 4 5 (A)

Comments \_\_\_\_\_

II. Environment/Housekeeping/Maintenance "Concerning your room,

4. have you had a problem with your roommate.....yes/no

5. If yes, how satisfied were you with how the staff handled it..... 1 2 3 4 5 (A)

6. How satisfied are you with the noise level..... 1 2 3 4 5 (E)

7. How satisfied are you with the privacy of your room..... 1 2 3 4 5 (A)

8. Were you given a choice when room would be cleaned.....yes/no (C)

9. How satisfied were you with the way in which your choice was honored ... 1 2 3 4 5 (A)

10. Were you asked if you are bothered by certain cleaning supplies.....yes/no (C)

11. How satisfied were you with the way in which your sensitivities were considered..... 1 2 3 4 5 (A)

12. Were you offered the use of music audio tapes.....yes/no (C)

13. If you used audio tapes, how satisfied were you with how they added to your relaxation..... 1 2 3 4 5 (E)

14. Were you offered the use of videos.....yes/no (C)

15. If you used videotapes, how satisfied were you with how they added to your relaxation..... 1 2 3 4 5 (E)

16. Were you offered the use of the kitchenette.....yes/no (C)

17. How satisfied are you with the working condition of TV/bed/phone/call/lights..... 1 2 3 4 5 (E)

What, if anything, could the hospital do to improve its service in this area?"

VII. Surgery

40. "If you had surgery, how satisfied were you with the surgery staff's  
 explanation of what to expect following surgery.....N/A 1 2 3 4 5 (T)

41. How satisfied were you with the answers you received  
 to your questions".....N/A 1 2 3 4 5 (T)

Comments \_\_\_\_\_

"Other ideas on how the hospital can improve the way it provides services?"  
 \_\_\_\_\_

## Appendix B

**Research Project Exclusion Tally**

In order for me to know how representative the sample is of all the patients admitted, would you please indicate the reason that a patient was excluded from the study? Record next to their number the code letter matching the exclusion reason:

- A. intrapartum
- B. less than age 18 years
- C. current hospitalization less than 30 hours
- D. subject too ill to participate at 30 hours of hospitalization (will be asked to participate after the acute stage of their illness has passed)
- E. subject is cognitively impaired

#	Exclusion Code	Sex	Age
1.	_____		
2.	_____		
3.	_____		
4.	_____		
5.	_____		
6.	_____		
7.	_____		
8.	_____		
9.	_____		
10.	_____		
11.	_____		
12.	_____		
13.	_____		
14.	_____		
15.	_____		
16.	_____		
17.	_____		

Appendix C

IRB# 3982

Approved November 13, 1995

OREGON HEALTH SCIENCES UNIVERSITY

Consent Form

**TITLE.** Patient Satisfaction with a Patient-Centered Inpatient Care Delivery Program in a Rural Community Hospital.

**PRINCIPAL INVESTIGATOR.** Pat Orme, RN, a graduate nursing student is the principal investigator; her telephone number is 271-5600. She is not employed by the hospital. Her advisor is Darlene McKenzie, Ph.D..

**PURPOSE.** The purpose of this study is to discover how patients feel about the care they receive from Lower Umpqua Hospital. Input from patients is critical to the hospital's efforts towards improving services. This will involve a single meeting with Pat Orme.

**PROCEDURES.** The plan is for Pat Orme to meet with you once to ask you questions. She will follow a questionnaire which asks you to rate your level of satisfaction with a number of different hospital services, such as admitting, nursing care, and x-ray. The interview will take about 1/2 to 1 hour. Should you tire or require treatments, the interview can be stopped and arrangements made for another time to complete it.

**RISKS AND DISCOMFORTS.** The interview may inconvenience you. You can stop the interview at any time if you wish.

**BENEFITS.** You may not personally benefit from participating in this study. However, by serving as a subject, you may contribute new information which may benefit patients in the future. The findings will help the hospital to improve the way they deliver services to patients.



**ALTERNATIVES.** If you would like to give input to the hospital without being a part of this study, you may complete a different questionnaire or talk or write to the Hospital Administrator or other staff.

**CONFIDENTIALITY.** Your responses will be completely confidential. Results of the study will be shared with hospital management only at the end of the study, after you have been discharged. The study results will have no information that will identify you.

Neither your name nor your identity will be used for publication or publicity purposes.

According to Oregon law, suspected child or elder abuse must be reported to appropriate authorities.

**COSTS.** There is no cost to you for participating in this study.

**LIABILITY.** The Oregon Health Sciences University, as an agency of the state, is covered by the State Liability Fund. If you suffer any injury from this research project, compensation would be available to you only if you establish that the injury occurred through the fault of the University, its officers, or employees. If you have further questions, please call the Medical Services Director at (503) 494-8014.

**PARTICIPATION.** Pat Orme, 271-5600, has offered to answer any other questions you may have about this study. If you have any questions regarding your rights as a research subject, you may contact the Oregon Health Sciences University Institutional Review Board at (503) 494-7887. You may refuse to participate, or you may withdraw from this study at any time without affecting your relationship with or treatment at Lower Umpqua Hospital or the Oregon Health Sciences University. You may be removed from the study at the investigator's discretion.

You will receive a copy of this consent form. Your signature below indicates that you have read the foregoing and agree to participate in this study.

_____ Patient's Signature	_____ Date	_____ Investigator's Signature	_____ Date
_____ Witness's Signature	_____ Date		