

Identifying the Dimensions of a Value-Based Care Organization in Patients with Breast Cancer: Findings from a Qualitative Study

Ghahraman Mahmoudi, Mojgan Tavana, Fatemeh Dabbaghi, Mohammad Ali Jahani

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Abstract

Background: The rising costs of breast cancer treatment, along with patients' dissatisfaction regarding quality of care, have become significant challenges for Iran's health system.

Objective: This study aimed to identify the key dimensions of value-based care within Iran's healthcare system and to develop a conceptual model for its implementation in breast cancer patients.

Methods: This qualitative research was conducted through semi-structured interviews with 20 participants, including physicians, managers, nurses, psychologists, a physiotherapist, and informed patients. Participants were selected by purposive sampling, and interviews continued until theoretical saturation was reached. Data collection and analysis were performed concurrently using open, axial, and selective coding. To ensure the credibility of findings, member checking, participant review, and collaborative analysis were employed.

Results: Data analysis resulted in the extraction of 739 initial codes, 152 concepts, 25 subcategories, and finally 5 main categories: "Ethical and Professional Standards," "Financial and Managerial Support," "Patient and Family Engagement," "Provision of Appropriate Services and Facilities," and "Quality and Reliability of Services." These categories reflected a wide range of concerns among patients, healthcare providers, and managers, including treatment equity, access to medications, insurance coverage, gender-sensitive care, family involvement, and deployment of skilled personnel.

Conclusions: The findings suggest that the successful implementation of value-based care in Iran's health system requires simultaneous attention to cultural, structural, managerial, and human factors. A clear understanding of patient priorities, active stakeholder participation, and the development of supportive and technological infrastructures are essential for effective application of this model in breast cancer care.

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Original Manuscript

Identifying the Dimensions of a Value-Based Care Organization in Patients with Breast Cancer: Findings from a Qualitative Study

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Abstract

Background and Objective: The rising costs of breast cancer treatment, along with patients' dissatisfaction regarding quality of care, have become significant challenges for Iran's health system. This study aimed to identify the key dimensions of value-based care within Iran's healthcare system and to develop a conceptual model for its implementation in breast cancer patients.

Methods: This qualitative research was conducted through semi-structured interviews with 20 participants, including physicians, managers, nurses, psychologists, a physiotherapist, and informed patients. Participants were selected by purposive sampling, and interviews continued until theoretical saturation was reached. Data collection and analysis were performed concurrently using open, axial, and selective coding. To ensure the credibility of findings, member checking, participant review, and collaborative analysis were employed.

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Conclusion: The findings suggest that the successful implementation of value-based care in Iran's health system requires simultaneous attention to cultural, structural, managerial, and human factors. A clear understanding of patient priorities, active stakeholder participation, and the development of supportive and technological infrastructures are essential for effective application of this model in breast cancer care.

Keywords: Value-based care, Breast cancer, Health system

Introduction

The rising costs of breast cancer treatment in Iran, without a corresponding improvement in clinical outcomes or patient satisfaction, have seriously challenged the healthcare system, leading to resource waste, inequitable access, and reduced treatment effectiveness. Simply expanding services without evaluating clinical outcomes and patient experiences fails to meet patients' needs and undermines

health system efficiency. This has led to increasing interest in Value-Based Healthcare (VBHC) as an innovative approach to enhance service quality and effectiveness.

With an aging population and increasing prevalence of chronic diseases including breast cancer, the burden of non-communicable diseases (NCDs) on health systems has intensified, underscoring the need to transform service delivery through value-based care models (1). Over 63% of global deaths result from major chronic conditions such as cancer, cardiovascular diseases, respiratory diseases, and diabetes (2), highlighting the need for optimized management of chronic diseases. Breast cancer, in particular, imposes a large financial burden on healthcare systems, making improvement of its outcomes essential for public health (3). Research shows that despite rising cancer care costs—including breast cancer—patient and provider satisfaction has not increased proportionately (4). Thus, adopting a value-based approach that eliminates low-value, unnecessary services by focusing on desired outcomes can simultaneously improve treatment quality and reduce avoidable costs (5).

VBHC is defined as emphasizing the ratio of improved treatment outcomes to costs incurred (6). Its primary goal is maximizing patient value—achieving the best clinical outcomes per unit of cost (7). Value in healthcare is conceptualized as the improvement in patients' health relative to the cost required to achieve it (8). Therefore, quality assessment should focus on outcome-to-cost ratio rather than service volume or cost reduction alone (9). Healthcare systems and providers must thus prioritize continuous improvement in clinical outcomes and cost-efficiency, avoiding low-value services (10).

Globally, developed countries are progressively transitioning to VBHC systems, with studies showing improved clinical effectiveness through such models (11). Known as Value-Based Medicine, this approach evolved from evidence-based medicine and prioritizes patient outcomes over service volume (12). In the U.S., initiatives by the Centers for Medicare & Medicaid Services (CMS) promote value-based payment models such as bundled payments incentivizing high-quality care at optimal costs. In Europe, the Santeon hospital alliance in the Netherlands has measured patient outcomes using International Consortium for Health Outcomes Measurement (ICHOM) standards (13). The OECD has also explored payment systems and care coordination methods to promote value-based care internationally. However, due to long-term reliance on fee-for-service models, many countries—especially those with limited resources—struggle to transition, hindered by poor outcome measurement and stakeholder resistance (14).

In developing countries like Iran, a major challenge is the lack of reliable data infrastructure to simultaneously measure care quality and cost. Comprehensive systems for collecting treatment cost and clinical outcome data remain scarce (15). Consequently, VBHC is not yet fully embedded in policy, and systematic efforts remain limited. The lack of robust data delays value-driven policymaking; reforms such as service package adjustments or health technology assessments have been inadequately implemented. Nonetheless, recent progress includes the Ministry of Health's emphasis on national monitoring of healthcare service value. Despite this, infrastructural gaps in routine data collection and reporting remain critical barriers. Studies by Tavana et al. show that value-based oncology care improves patient-centeredness (e.g., enhanced physician-patient communication, shared decision-making, increased trust and satisfaction, better quality of life), structured care delivery (e.g., guideline adherence, reduced cost and wait-times), improved information systems (e.g., timely data collection), and patient-reported outcomes like quality of care, survival, and treatment response (16).

Moreover, the concept of value in healthcare extends beyond economic factors to include psychological, social, and cultural dimensions (17). A comprehensive qualitative study revealed that provider professionalism, communication skills, empathy, service performance, and organizational culture are essential components of value. Such findings underline the importance of considering human and environmental factors, with qualitative research revealing perceptions, experiences, and needs of patients and providers in specific sociocultural contexts (18).

While VBHC expands in developed countries, developing nations like Iran face challenges including data scarcity and limited experience (19–21). Additionally, recent research highlights non-economic dimensions of healthcare value. The critical need to identify context-specific VBHC dimensions, coupled with the absence of studies on patient and provider perspectives in Iran, motivated this qualitative study to explore core value-based care dimensions in breast cancer treatment from these stakeholders' viewpoints. This research aims to fill a gap by emphasizing semantic, social, and cultural aspects in Iranian healthcare, laying groundwork for improved value-based cancer care strategies.

Materials and Methods

This qualitative study applied grounded theory to identify the dimensions of value-based care in breast cancer treatment by extracting fundamental concepts from empirical data. Grounded theory, developed by Glaser and Strauss, facilitates theory generation rooted in data through simultaneous collection and analysis, with core concepts emerging via continuous comparison. This approach was chosen to develop a conceptual framework reflecting the perspectives of key stakeholders in breast cancer care. Its iterative, data-driven nature suited the exploratory aims of the study.

Development of the Interview Guide

The interview guide was developed systematically to gather rich qualitative data on implementing value-based care for breast cancer patients. Initially, a thorough systematic review of scientific literature, macro health policies, and related studies—especially addressing value-based care in chronic diseases and breast cancer—was conducted to establish a deep understanding of core concepts, global experiences, and existing research gaps.

A preliminary semi-structured questionnaire was then drafted to capture diverse viewpoints across healthcare levels, including patients, physicians, nurses, managers, psychologists, and other professionals. The questions explored factors facilitating successful implementation, challenges encountered, and lived experiences.

Open-ended, exploratory questions were emphasized to enable participants to freely and unbiasedly express their perspectives. The guide was designed as dynamic, allowing adaptation based on ongoing data analysis to reach theoretical saturation.

Three experts in medical sciences, health management, and qualitative research reviewed the initial guide to enhance clarity, coverage, and neutrality. A pilot test with two prospective participants assessed feasibility and comprehension. This phased, iterative process strengthened content validity and ensured in-depth, analyzable data collection.

Population and Sample

The target population comprised experts in breast cancer and value-based care. Using purposive sampling, 20 individuals were selected to represent multidisciplinary perspectives, including oncology specialists, health psychologists, treatment managers, health researchers, and knowledgeable patients contributing lived experiences.

Sampling continued until theoretical saturation was achieved—i.e., when new interviews yielded no fresh fundamental insights. Inclusion criteria included relevant oncology care or management experience and willingness to participate. Individuals who withdrew or lacked sufficient study knowledge were excluded. The research team confirmed 20 interviews sufficient to reach saturation.

Interview Process and Data Collection

Data were collected via individual, semi-structured, face-to-face interviews. The guide combined open and closed questions with flexible sequencing to foster natural dialogue flow. Interviews took place at participants' workplaces or suitable venues.

All interviews were audio-recorded with participant consent, accompanied by detailed handwritten field notes capturing context and observations. Prior to interviews, written informed consent was obtained, explaining study aims and guaranteeing confidentiality; participants also consented to recording and data usage.

Following verbatim transcription, interviewees received transcripts for member checking, enabling correction or confirmation of their statements.

Field observations were conducted when possible—focusing on patient care sessions and related settings—to complement interviews. Triangulating interviews and observations enhanced data richness and credibility.

Data Analysis

Data analysis followed grounded theory coding procedures. Initially, two researchers independently performed open coding on interview transcripts to extract initial concepts. Coding discrepancies were resolved through discussion, ensuring consensus and consistency.

After about 20 interviews, once saturation was reached, open coding concluded. Axial coding then identified and related subcategories, integrating concepts. Finally, selective coding synthesized main themes and the theoretical framework.

Data collection and analysis occurred concurrently, employing continuous comparative analysis for emergent coding and theory development.

Validity and Reliability Assurance

To ensure rigor and trustworthiness, multiple qualitative validation strategies were applied. Member checking involved sharing preliminary findings and categories with participants to verify interpretation accuracy; their feedback refined coding.

The research team critically reviewed analysis reports to ensure consistency and interpretive coherence. Triangulating data sources—including interviews, field notes, and diverse participant perspectives—further strengthened validity. Collectively, these methodological safeguards ensured that the findings were credible, accurate, and genuinely reflective of participants' experiences.

Findings

Of the participants interviewed, 12 individuals (60%) were male and the remaining were female. The sample comprised 3 oncologists, 1 surgeon, 3 hospital managers, 3 head nurses, 4 health services managers, 1 physiotherapist, 2 psychologists, 2 university professors, and 1 informed patient. The mean age of participants was 50.25 years (SD: 7.21; range: 35–69 years), and the average length of professional experience was 22.3 years (SD: 7.47; range: 10–33 years).

Table 1 – Descriptive Characteristics of Participants in the Value-Based Care Redesign Interviews

Variable	Frequency (%)	Mean (SD)
Gender		
Female	8 (40)	
Male	12 (60)	
Position		
Oncologist	3 (15)	
Surgeon	1 (5)	
Hospital Manager	3 (15)	
Head Nurse	3 (15)	
Health Services Manager	4 (20)	
Physiotherapist	1 (5)	
Psychologist	2 (10)	
University Professor	2 (10)	
Informed Patient	1 (5)	
Age		50.25 (7.21)
Work Experience		22.3 (7.47)

After conducting and transcribing interviews, 739 relevant codes were identified through qualitative

analysis. These codes were organized into 152 concepts, further grouped into 25 components (subcategories) and finally into 5 main categories (dimensions). The five key categories identified were: Ethical and Professional Standards; Financial and Managerial Support; Patient and Family Engagement; Provision of Appropriate Services and Facilities; and Quality and Reliability of Services.

The Ethical and Professional Standards category included three components: adherence to professional ethics, gender sensitivity during treatment, and promotion of equity. The Financial and Managerial Support category encompassed insurance coverage for care, facilitation of patient payments, and mobilizing charitable support. The Patient and Family Engagement category involved six components: respect for patients, providing information to patients, informing patients' companions, counseling services, addressing companions' needs, and supplementary patient support. The Provision of Appropriate Services and Facilities category consisted of four components: comprehensive care delivery, stable drug supply, development of treatment facilities and equipment, and ensuring a suitable hospitalization environment. The Quality and Reliability of Services category included five components: timely service delivery, enhancing service quality, employing qualified personnel, responsiveness, and accuracy in care delivery. Detailed descriptions and examples of each category and its components follow in subsequent sections.

Ethical and Professional Standards

This dimension involves adherence to professional ethics, respect for gender sensitivities, and commitment to justice in healthcare delivery. Observing professional ethics means upholding patients' rights, maintaining confidentiality of medical information, and preserving patient dignity throughout treatment. Additionally, respecting gender conformity is crucial for honoring patients' cultural and social sensitivities.

Observance of Professional Ethics: Commitment to moral principles such as honesty, confidentiality, respect for patients, and accountability is fundamental. Physicians and nurses are expected to provide patients with complete, accurate information, support informed decision-making, and address individual patient needs attentively.

"We always strive to provide patients with complete and accurate information, even when it is difficult or upsetting. Honesty and transparency build trust." (P1). "Protecting patient information is a priority; we assure patients their personal and medical data remain confidential." (P2)

Observance of Gender Conformity in Treatment: Respecting gender preferences across all treatment stages is important. For cultural or personal reasons, some patients prefer same-gender healthcare providers. Accommodating this reduces anxiety and enhances comfort, especially in private or sensitive care.

"Some patients prefer same-gender providers, and respecting this makes them feel more secure." (P1). "For private treatments, we pay close attention to the gender of caregivers." (P2)

"If a patient requests treatment only by same-gender staff, this must be respected to ensure comfort." (P7)

Observance of Justice: Justice entails equitable access to healthcare services regardless of patients' economic, social, or gender status.

"We ensure all patients, regardless of financial or social status, receive equal, high-quality care without discrimination." (P2). "Every patient has equal opportunity for the best healthcare services." (P4). "Healthcare quality should never vary by socioeconomic differences; all patients must benefit from optimal care." (P5)

Financial and Administrative Support

Financial and administrative assistance is key in value-based cancer care, including insurance coverage, payment facilitation, and attracting donations. These help ease patients' financial burdens and improve access to quality healthcare.

Insurance Coverage: Adequate insurance is critical due to high treatment costs, covering much of the

expenses and assuring patients can complete all treatment stages without financial worries.

"Insurance coverage prevents patients from facing extra costs for essential treatments." (P8). "Health insurance is vital during complex cancer treatment phases; without it, timely care may be impossible." (P11)

Facilitating Patient Payments: Healthcare systems should actively alleviate patients' financial burdens, especially when treatment costs are high. This includes options like installment payment plans, discounts for low-income patients, or direct financial aid, with the goal of ensuring no patient is denied necessary treatment due to cost.

"We try to offer installment payment plans for patients unable to pay upfront." (P1). "Our hospital supports low-income patients through discounts and special facilities, enabling them to access essential treatments without financial worries." (P2). "We provide discounts at various treatment stages, including medications and hospitalization, to reduce financial pressure on financially vulnerable patients." (P3)

Attracting Donor Participation: Donors and nonprofit organizations significantly contribute by financing treatment costs and supplying medical equipment and medications. Their support allows financially disadvantaged patients to receive quality care continuously without economic stress.

"Thanks to donor cooperation, we have covered a substantial part of treatment costs for needy patients, helping them continue treatment without financial concern." (P1). "We collaborate with donors to supply necessary medical equipment and medications for patient care." (P5)

Interaction with the Patient's Family: Engaging meaningfully with cancer patients' families is vital in value-based care. This involves respecting patients and families, providing timely, transparent information, and offering psychological support. Families serve as crucial emotional and practical support resources and play an important role in treatment decision-making.

Respect for the Patient: Respecting patients reflects attention to their dignity and personal values, including courteous behavior, actively listening to their opinions, and safeguarding privacy throughout treatment.

"We always aim to make patients feel valued and respected." (P2). "I consistently listen carefully to patients' opinions and requests." (P3). "Protecting patient privacy is essential at all treatment stages." (P4)

Providing Information to the Patient: Offering clear, accurate information about illness, treatment, side effects, and progress helps patients understand their condition and participate actively in decisions, reducing anxiety.

"I always strive to fully inform patients about their illness status." (P5). "Patients must be aware of all treatment stages to make informed decisions." (P6).

Providing Information to the Patient's Companions: Informing patients' companions is equally important, as they offer vital support during treatment. Timely information enables companions to assist effectively, understand challenges, and participate in care.

"My essential role includes keeping companions informed about the patient's condition to enhance their support." (P3). "Companions need to understand the treatment process since they are involved in medical decisions and support." (P7). "When companions know potential side effects, they can better support the patient and reduce worries. I always explain expected side effects and how companions can help." (P16)

Providing Counseling Services to the Patient: Counseling services offer psychological and social support to cancer patients, helping them manage the emotional challenges of illness. Delivered individually, in groups, or with families, these services significantly improve patients' quality of life.

"Many patients have reduced their worries and become more resilient during treatment with counseling." (P2). "Group counseling is particularly beneficial as it enhances patients' social support." (P4)

Providing Appropriate Services to the Patient's Companions: Patient companions play a vital

caregiving role and need supportive services such as resting areas, clear information, and psychological counseling to assist patients effectively.

"Companions need rest and support; designated hospital resting spaces help them physically and mentally care for their loved ones." (P3). "Clear, accurate information about treatment, side effects, and patient needs helps companions make informed decisions." (P2)

"Companions may feel psychological pressure, especially when patients are critical; counseling helps them manage stress." (P4)

Additional Support for the Patient: Cancer patients often face financial, legal, and social challenges. Financial aid, legal advice, and social resources reduce these burdens, allowing focus on recovery.

"Many cancer patients face financial difficulties; financial aid and payment facilitation help them concentrate on treatment." (P3). "Legal guidance helps patients resolve issues and continue treatment without added worries." (P2).

Provision of Appropriate Services and Facilities: A fundamental dimension of value-based care is providing comprehensive services and facilities tailored to cancer patients' needs—including medication access, advanced equipment, and comfortable hospitalization to improve treatment experience and care quality.

Providing Comprehensive Services: Delivering integrated medical, psychological, and social support allows patients and families to access coordinated care in one center, reducing complexity.

"Patients should access all medical, psychological, and social services in a single center, avoiding visits to multiple locations." (P1). "At my center, all services—psychological counseling, medication, surgery, and social support—are integrated." (P4).

Providing Medications: Timely, uninterrupted access to specialized medications is critical for cancer treatment success, speeding therapy and assuring well-managed care. This also includes advanced therapies.

"Specialized medications are key to treatment success. We strive to provide continuous, timely supply to avoid delays." (P2). "Delays in medication supply cause considerable patient anxiety." (P5). "Our center consistently provides essential drugs impacting treatment outcomes positively." (P8)

Developing Treatment and Care Facilities and Equipment: Upgrading medical instruments and technologies improves diagnostic accuracy, accelerates treatment, enhances outcomes, and ensures safer, more comfortable care.

"Modern devices at our hospital have notably improved diagnostic accuracy and treatment speed." (P4). "Advanced technologies help detect diseases earlier, substantially improving prognosis." (P6). "Such technologies accelerate treatment delivery." (P3)

Providing a Comfortable Hospitalization Environment: A comfortable hospitalization environment is vital for supporting patients during treatment and recovery. It should be calm, clean, and designed to reduce physical and psychological stress. Key features include private rooms, designated companion areas, and a soothing atmosphere that collectively enhance patient well-being.

"A calm and clean environment, along with comfort amenities, greatly influences the patient's recovery process." (P2). "Our hospital offers private rooms that help patients feel mentally comfortable, alongside spaces for companions to stay and support their loved ones." (P5)

Quality and Reliability of Services: Quality and reliability are central to value-based care for cancer patients. This dimension includes timely service delivery, continuous improvement in care quality, skilled healthcare professionals, responsiveness, and accuracy. These elements build patient trust and increase satisfaction.

Timely Provision of Care and Treatment Services: Timely care means rapid and uninterrupted access to critical medical services.

"At this center, the healthcare team promptly provides medical services as soon as patients need them, ensuring patients feel immediately cared for." (P4). "Quick and effective responses from

healthcare teams are crucial for recovery; timely treatment initiation reassures patients they are on the path to healing." (P6). "Timely medical services help prevent disease progression and significantly reduce patient anxiety." (P8).

Improving Service Quality: Enhancing quality involves constant advancement in treatment methods, using best practices, advanced equipment, and continuous staff training. The goal is to optimize treatment outcomes and patient satisfaction.

"Our hospital consistently applies the latest, most effective treatments, improving care and boosting patient confidence in the healthcare team." (P3). "Modern and advanced equipment improves diagnostic accuracy and enables faster, more precise treatment." (P7). "Regular training and refresher courses keep staff skills updated, enabling delivery of high-quality care and raising medical service standards." (P10).

Employing Skilled and Experienced Staff: Employing skilled and experienced personnel is vital for successful cancer treatment. Well-trained staff ensure accurate diagnoses and effective therapies. Their empathetic communication and ability to build patient trust are key aspects of quality care.

"Our patients feel safe because our medical staff have extensive experience and continually participate in development courses, enabling them to deliver the best treatments." (P2). "Our healthcare team's expertise allows precise diagnoses and effective treatments, which is critical in cancer care." (P4).

Responsiveness: Responsiveness to patients and companions is fundamental for quality service. The healthcare team should be readily available to address questions and concerns, reducing patient anxiety, increasing trust, and fostering support.

"Patients know they can easily reach us with questions or concerns, which helps them feel secure and less stressed." (P3). "Our team responds consistently, attentively listening to questions throughout treatment and providing suitable answers, enhancing trust." (P5). "Being ready to answer questions eases patient stress. Many worry about responsiveness during complex treatments, but our team always provides reassurance." (P7).

Accuracy in Service Delivery: Accuracy requires careful attention and precise execution of all treatment stages. This professionalism minimizes errors, ensures optimal outcomes, accelerates recovery, and prevents complications.

"Attention to detail is crucial throughout cancer treatment. Each step must be precise to avoid mistakes and ensure smooth progress with fewer complications." (P2). "All treatment decisions rely on accurate information and thorough patient assessment. Precision in execution prevents errors and adverse events." (P4).

The main dimensions, sub-dimensions, and components identified through participant interviews in the value-based care redesign panel were compiled and validated by the research team.

Table 2 – Main dimensions, subdimensions, and components derived from interviews with participants in the value-based care redesign interview

Categories	Subcategories	Concepts	Frequency
Organization	Practical organization of value-based quality improvement teams	Time required for value-based care training	8
		Planning to upgrade the value-based care health team	6
		Support team services for advancing care delivery	6
Organizational Structure	Respect for patient-centered principles in providing value-based care	Observing an organizational structure appropriate for value-based care	8
			6

Categories	Subcategories	Concepts	Frequency
Integration of Value-Based Care with Existing Quality Improvement Approaches and Research	Joint decision-making by the value-based care team	Non-continuous incentives for health team specialists	6
		Continuous payments to providers	4
		Sharing information related to treatment discussions	8
		Balancing the quantity of services with the number of health specialists	6
		Financial benefits considered for delivering value-based care	6
		Job security	8
		Team members' mastery of value-based care missions and duties	2
		Lean management philosophy	2
		Patient feedback on provided care	2
		Conducting research in the field of value-based care	2
		Use of a specialized multidisciplinary treatment team	4
		Acceptance and awareness of the concept of value-based care in the hospital	2
		Level of knowledge about value-based care among health specialists	4
Culture	Acceptance and awareness of the concept of value-based care in the hospital	Belief in positive outcomes of value-based care	2
		Caregivers' perspective on breast cancer patients regarding value-based care	2
		Outcomes resulting from value-based care	2
Multidisciplinary Interaction	Interdisciplinary interaction in providing value-based care		2
		Size of the health specialists' team	8
		Standard distribution of human resources in value-based care	6
		Outcomes from value-based care	6
		Patient participation in providing value-based care	8
		Consultation and participation of health specialists outside the care team	6
		Readiness to accept changes within the value-based care team	6
		Intersectoral collaboration in various hospitals	4
Medical Leadership	Inspirational medical leadership		8
		Ability of medical leadership to interact with others	6
		Availability and participation of medical leadership	6
		Observance of medical ethics	8
Performance	Setting goals and selecting quality improvement projects	Clarity of value-based care goals	2
		Specific criteria for considering value-based care enhancement	2

Categories	Subcategories	Concepts	Frequency
Long cycle evaluation and short-term feedback	Observing and discussing treatment outcomes	Defined methods in value-based care programs	2
		Quality improvement without positive outcomes	2
		Evaluation of value-based care programs	2
		4	
		Short-term remote training	4
		Precise monitoring of patient's vital signs	2
		Physician accountability to patient	2
		Improving quality of care services in various hospital ownerships	2
		2	
		Evidence-based medicine	8
Data availability	Data collection and analysis	Timely recording and analysis of data	6
		Support of information technology for value-based care	6
		6	
Ethical and Professional Standards	Observance of professional ethics	Observance of staff professional ethics	8
		Observance of medical ethics	6
Gender conformity in treatment process	Gender conformity in nursing services	6	
		Gender conformity in medical services	4
Justice observance	Fair use of diagnostic equipment	8	
		Proper and fair distribution of facilities in hospitals	6
Financial and managerial support	Insurance coverage of care and treatment services	Appropriate insurance policies	6
		Adequate insurance coverage for patient costs	8
		Providing suitable insurance services	2
		Increasing insurance support	2
		Cost reduction according to protocol	2
Facilitating patient cost payments	Providing financial facilities	3	
		Offering diverse payment methods based on patient financial conditions	3
		Providing loans to needy patients	3
		Allocating treatment subsidies to needy patients	5
		Facilitating payment conditions for patients	6
		Free treatment for special patients	6
Engaging donors	Providing drug costs by donors	7	
		Providing patients' food costs by donors	5
		Establishing costly departments with donors' help	6
		Procuring and supplying medicine	6
		Providing appropriate services to patients with donors' help	3
		Rehabilitation of needy patients with donors' participation	-
Interaction with patient and family	Respect for the patient	Respect for patient's emotions and feelings	8
		Staff respect for patient and their companion	6
		Nurse-patient interaction and communication	6

Categories	Subcategories	Concepts	Frequency
Providing awareness to the patient	Informing patient about treatment process	Physician-patient interaction and communication	8
		Patient satisfaction surveys	6
		6	
		Informing patient of their rights	4
		Informing patient about their disease	8
		Informing patient about insurance services	6
		Informing patient about free diagnostic services	6
		Informing patient about charitable institutions' services	8
		Informing patient about drug side effects	2
		Informing patient about treatment method side effects	2
Providing awareness to patient's companion	Informing companion about drug side effects	Informing patient about how to store and use medication at home	2
		2	
		Informing companion about patient's treatment process	2
Providing counseling services to the patient	Counseling patient at discharge	Companion's awareness of patient's condition	4
		4	
		Counseling patient in different hospital wards	2
		Nutritional counseling for the patient	2
		Telephone counseling for patients	2
		Medication counseling for the patient	2
		Psychiatric counseling in various hospital wards	8
		Psychological counseling	6
		Counseling patient about treatment methods	6
		Necessary counseling for patient in choosing treatment method	8
		Necessary counseling services	6
		Accurate and coordinated medical counseling to patient	6
Providing appropriate services to patient's companion	Allocating rest area for patient's companion	4	
		Providing necessary training to patient's companion	8
		Providing care services to patient's companion	6
		Providing mental and psychological care to patient's family	6
		Providing necessary counseling to patient's companion	8
		Providing psychological counseling to patient's companion	2
Additional support for patient	Allocating more time to patient	2	
		Providing appropriate rehabilitation services	2
		Broadcasting patient's recovery news among other patients	2
		Timely screening	2
		Providing supportive treatments	4
		Importance of patient's diet	4

Categories	Subcategories	Concepts	Frequency
Provision of appropriate services and facilities	Providing comprehensive services	Creating a space with positive energy	2
		Providing loaner treatment equipment to patient	2
		Boosting patient's morale	2
		Economic support	2
		Providing comprehensive diagnostic services	8
		Providing multidisciplinary services	6
		Providing mammography screening services	6
		Providing physiotherapy services	8
		Providing group therapy services	6
		Providing social work services	6
		Service delivery by experienced treatment team	4
		Providing team-based care	8
		Providing home therapeutic care	6
		Patient condition assessment	6
		Psychological and social status assessment	8
Drug supply	Appropriate policies to reduce drug prices	Oncology services	2
		2	
		Ensuring drug safety	2
		Timely provision of vital patient medications	3
		Provision of special medications needed by patients	3
		Providing necessary drugs at reasonable prices	3
		Including drugs for special patients under coverage	5
		Facilitating drug purchasing conditions	6
Development of therapeutic and care facilities and equipment	Establishment of 24-hour specialized clinics	Free coverage of labeled drugs under insurance	6
		7	
		Providing appropriate diagnostic and therapeutic facilities	5
		Use of private sector health-oriented groups	6
		Optimal use of health technologies	6
		Establishing oncology team in hospital	3
		Establishing a full consulting team in hospital	8
		Increasing specialized clinics	6
		Equipping hospital with advanced diagnostic and therapeutic devices	6
		Signing cooperation memorandum between hospital and health centers	8
		Providing greater access to specialized treatment centers	6
Providing a desirable inpatient environment	Providing appropriate hoteling services	6	
		Ensuring workplace safety	4
		Providing necessary accommodation facilities	8
		Providing required beds	6
		Beautiful interior decoration of wards	6
		Maintaining environmental hygiene	8

Categories	Subcategories	Concepts	Frequency
Quality and reliability of services	Timely provision of care and treatment services	Timely nursing care	2
		Creating intersectoral coordination in care delivery	2
		Timely disease diagnosis	2
		Timely physician presence at patient's bedside	2
		Pharmacist presence at patient's bedside	2
		Timely access to physician	4
		Timely access to treatment staff	4
Improving service quality	Avoiding unnecessary medical services	2	
		Improving quality of life	2
		Improving quality of patient's inpatient conditions	2
		Improving quality of care services in various hospital ownerships	2
		Selecting optimal treatment method considering economic limitations	8
		Providing online access to medical and nursing services for patients	6
		Updating treatment methods	6
		Utilizing experiences of previous patients	8
Employing capable and experienced personnel	Increasing nurses' drug knowledge	6	
		Increasing staff morale	6
		Creating job security for the treatment team	4
		Increasing staff motivation	8
		Increasing medical knowledge of staff	6
		Increasing doctors' drug knowledge	6
		Case finding	8
		Providing specialized personnel	2
		Cost control of treatment by staff	2
Accountability	Physician accountability to patient	2	
		Observance of patient rights charter	2
		Appropriate leadership	2
		Identifying patient problems	4
		Scientific management of hospital	4
		Hospital resource management	2
Accuracy in service delivery	Providing medication services with appropriate dosages	2	
		Precise visit and examination services	2
		Prescription of drugs according to standards	2
		Accurate recording of medication information in patient file	8
		Providing care services according to protocols	6
		Precise monitoring of patient's vital signs	6

Discussion

This study highlights the crucial role of the “Ethical and Professional Standards” category—including adherence to ethical principles, gender concordance in treatment, and justice in healthcare delivery—in enhancing care quality. Qualitative findings reveal that many patients value respect for

human dignity and ethical behavior by care teams as much as clinical treatment itself. Gender concordance was particularly important for patient comfort and safety, especially within cultural contexts like Iran, where gender norms heavily influence healthcare experiences.

Prior research supports the importance of ethics in value-based care. Bell et al. (2022) argue that inadequate ethics training among oncologists undermines respect for patient dignity and hampers effective value-based care implementation (22). Zheng et al. (2021) stress that justice and mutual respect are essential for sustaining care quality (23). In contrast, Xu et al. (2023) focus more on economic factors, highlighting a disparity where some countries prioritize financial goals over ethical care (24). This underscores a critical research gap, particularly regarding gender-sensitive care. While patients in this study emphasized gender concordance, international reviews by de Vasconcelos Silva et al. (2022) and Leusder et al. (2022) largely overlook this issue (25, 26), a significant omission in cultures where gender plays a pivotal role in treatment acceptance.

The findings reaffirm the need for policymakers to prioritize ethical frameworks based on cultural values alongside financial and managerial structures to ensure successful value-based care. The “Financial and Managerial Support” category emerged as another key pillar, encompassing insurance coverage, patient payment facilitation, and philanthropic involvement. Participants stressed that insufficient financial support converts treatment into a major psychological and economic burden. This aligns with studies by Edmiston Kelly (2022) and Sandhu et al. (2023), demonstrating that financial supports like reimbursement programs and insurance enhance satisfaction and adherence (27, 28). Wood and Murphy (2024) found that outcome-based payment models combined with cost reductions lowered financial burdens and improved loyalty in Canadian cancer care (29). Leusder et al. (2022) highlight comprehensive cost management across the care cycle to prevent waste (26).

However, Abdallah et al. (2024) report that insurance alone does not guarantee value-based care success, citing unmet patient priorities despite coverage in Saudi Arabia (30). Similarly, Telles et al. (2025) identify distrust in charitable organizations in Latin America, especially where government oversight is weak (31). This study’s findings echo international recommendations emphasizing that financial and managerial support must be integrated, transparent, and aligned with patient engagement and data quality. Without such coordination, risks include resource misallocation and reduced intervention effectiveness.

The category of “Interaction with the Patient’s Family” in this study included respect for the patient, providing information, counseling services, and additional support. It highlights the crucial role of effective communication between healthcare teams and patients’ families. Families provide emotional support and play a key role in treatment adherence. Many patients reported that active family involvement, combined with psychological and social counseling, greatly improved their morale and quality of life. Especially during critical moments—such as treatment start or managing side effects—this interaction served as an important support, making the treatment experience more humane and bearable.

These findings are supported by several studies. Szamreta et al. (2023) showed that family support and counseling participation among cancer patients in Brazil are linked to better treatment adherence and reduced anxiety (32). Sharkiya (2023) noted that family involvement in medical decisions improves transparency, reduces ethical conflicts, and enhances value-based care quality (33). However, challenges exist. Liu et al. (2024), studying China, found that excessive family intervention—especially in traditional societies—can hinder shared decision-making and pressure patients into undesired treatments (34). Gunnlaugsdóttir et al. (2024) observed that when family members lack the skills to understand clinical information, their involvement can burden healthcare providers (35).

Andruske et al. (2020) highlight cultural differences in family roles during treatment: Eastern cultures often expect extensive family involvement, whereas Western cultures emphasize patient autonomy (36). Such diversity should be considered in care design. Overall, this study’s findings

align with global literature recognizing family interaction as vital in value-based care. Still, to avoid conflicts and undue pressure, attention to cultural norms, family health literacy, and ethical decision-making boundaries is essential. Policymakers and hospital administrators should strengthen family roles in care while creating educational frameworks to ensure effective and ethical participation.

The category of “Provision of Appropriate Services and Facilities” in this study represents a key infrastructural aspect of value-based care. It includes comprehensive service delivery, medication availability, development of medical facilities and equipment, and inpatient space availability, showing how both physical (hardware) and organizational (software) infrastructures shape patients’ perceptions of care quality. Participants emphasized the importance of comprehensive services—from diagnosis to rehabilitation—and noted that the absence of modern equipment or essential medications causes insecurity and uncertainty during treatment.

Supporting this, Shen et al. (2023) found that access to well-equipped facilities and a supportive physical environment in hospitals improved patient experiences and reduced preoperative anxiety (37). They highlighted how inpatient privacy and quietness positively affect patients psychologically. Similarly, Wang et al. (2025) showed that technological tools like digital platforms for lung cancer follow-up enhanced communication and sped response times (38). However, some studies offer contrasting views. Hempel et al. (2023) warned that expanding facilities without improving care coordination might increase unnecessary costs (39). Eriksson et al. (2021) noted that some value-based reimbursement programs, despite investments, failed to improve patient-reported outcomes due to poor integration of system components (40).

A major research gap exists in assessing the cost-effectiveness of healthcare infrastructure. While countries like the Netherlands and Norway have frameworks to evaluate infrastructure investments, many developing nations lack data and evaluation systems (41). This issue appeared in this study, where patients expressed dissatisfaction with the mismatch between equipment availability and consistent access to medications and services.

These findings suggest that improving service quality requires more than physical upgrades. An integrated, responsive system capable of delivering comprehensive, continuous, and coordinated care is essential. Value-based care’s success depends on coupling infrastructure development with strong management, human resources, and financial support.

The “Service Quality and Reliability” category includes timely care delivery, service quality improvement, skilled personnel, responsiveness, and treatment accuracy. These elements together foster patient trust and confidence in healthcare quality. Interviewees often highlighted that assurance of treatment accuracy and quality was key to trusting their physicians and the system.

Supporting this, Veiga et al. (2025) reported that over 30% of literature reviews identified treatment quality and accuracy as patient priorities in value-based care (42). Patient-reported outcomes were emphasized as vital for assessing quality. McAleavey et al. (2024) stressed diligent clinical monitoring and maintaining high clinician standards to build patient trust (43). Wiedermann (2025) found that high-quality multidisciplinary services increased patient confidence and reduced dissatisfaction (44). Morabito (2024) showed that precise lung cancer care pathways reduced waiting times and improved perceived quality (45).

Contradictions exist in the literature. Kumah (2025) found that despite rising costs and expanded services, patient satisfaction remained unchanged due to inconsistent quality across healthcare system levels (46). Asan et al. (2021) reported that having experienced physicians does not guarantee patient trust if communication is poor or treatment transparency is lacking (47). Tan et al. (2023) highlighted that inadequate education on value and cost during medical training causes many physicians to overlook precision and efficiency, leading to a gap between organizational goals and clinical practice (48).

A key gap is the focus on technical quality metrics while neglecting patients' perception of quality. Clinicians often measure quality by objective outcomes, but patients consider reliability, respect, and continuity. Molina et al. (2020) found patients prioritize these humanistic elements along with

clinical results (49). Yet health systems frequently rely on objective indicators like recovery rates or length of stay, undervaluing experiential measures such as accuracy, timeliness, responsiveness, and interpersonal communication—crucial for genuine value.

Oehrlein et al. (2023) suggest integrating patient-centered evaluations with clinical data to provide a comprehensive quality assessment (50). This study also shows that quality and reliability depend not only on staff competence and accuracy but also on respectful provider-patient interactions, ethical adherence, and responsiveness to patient concerns. True healthcare value requires close alignment with patient feedback.

Despite efforts to gather rich data, this study was limited to urban treatment centers, which may reduce generalizability. The focus on experts and informed patients might exclude other stakeholder perspectives. Lastly, reliance on qualitative interviews allows for subjective interpretation by researchers and participants.

Conclusion

The findings of this qualitative study demonstrate that the successful realization of value-based healthcare in breast cancer treatment necessitates comprehensive and systematic attention to multiple dimensions, including professional ethics, financial and managerial support, effective interaction with the patient's family, service quality, and healthcare infrastructure. The model developed herein not only captures the concerns of patients and care providers within the contextual realities of Iran's health system but also offers a localized framework addressing deficiencies in the country's official healthcare structures. While macro-level policies predominantly emphasize technological and structural enhancements, this study reveals the critical role of components such as adherence to professional ethics, gender concordance, respect, and transparent information delivery in fostering trust and treatment acceptance. Furthermore, facilitators like streamlined payment mechanisms and engagement of philanthropic entities emerged as vital enablers empowering patients to sustain their treatment journey.

A striking finding was the evident gap between patients' expectations and the actual quality of services received, particularly regarding responsiveness, service accuracy, post-discharge follow-up, and utilization of experienced multidisciplinary teams. This discrepancy underscores the urgent need to reform human resource training, redistribute responsibilities, and standardize professional interactions across care settings.

Overall, the conceptual model proposed in this study can serve as a foundational framework for crafting value-based care policies in Iran—one grounded in local realities rather than merely replicating international models. This research represents a practical step toward bridging theoretical concepts with the Iranian health context and provides a clear direction for applied research, educational program development, and especially policy formulation at the national healthcare system level.

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