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Healthcare Providers' Perspectives on the Implementation of Patient-Centered Care Models in Hospitals

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ABSTRACT

This study explores healthcare providers' perspectives on the implementation of patient-centered care (PCC) models in hospitals. It aims to identify key themes related to understanding, experiences, perceived benefits, and challenges associated with PCC to inform better practices and policies. A qualitative research design was employed, utilizing semi-structured interviews to collect data from 21 healthcare providers, including doctors, nurses, and administrative staff, in various hospitals. Participants were selected through purposive sampling to ensure diverse perspectives. Data collection continued until theoretical saturation was achieved. The interview data were transcribed and analyzed using NVivo software, following a thematic analysis approach to identify and refine key themes. The analysis revealed four main themes: understanding of PCC, experiences with implementation, perceived benefits, and challenges faced. Providers described PCC as holistic, individualized care requiring effective communication and cultural competence. Implementation experiences highlighted the importance of planning, resource allocation, interdisciplinary collaboration, and feedback mechanisms. Benefits of PCC included improved patient satisfaction and outcomes, better work environments, efficiency in care delivery, patient trust, and enhanced staff morale. Challenges encompassed resistance to change, resource limitations, training and support deficiencies, interpersonal dynamics, and systemic barriers. The study underscores the critical role of comprehensive training, effective communication, and adequate resources in implementing PCC. Despite significant challenges, the benefits of PCC for patients and providers are evident. Addressing implementation barriers through continuous education, supportive policies, and robust feedback mechanisms can enhance the adoption and sustainability of PCC models. Future research should focus on expanding sample diversity, quantitative measures, and the impact of technology on PCC.

Keywords: Patient-centered care, healthcare providers, qualitative research, hospital care models, implementation challenges, benefits of PCC, thematic analysis, NVivo, holistic care, interdisciplinary collaboration

1. Introduction

The healthcare domain has increasingly emphasized the need for patient-centered care (PCC), a model that prioritizes the preferences, needs, and values of patients, ensuring that they guide all clinical decisions (1-4). This approach is rooted in the belief that healthcare systems should be designed to serve patients effectively by focusing on their individual experiences and outcomes rather than adhering solely to a standardized set of clinical guidelines. Patient-centered care is not merely a clinical intervention but a integrative approach that encompasses various aspects of healthcare, including organizational culture, provider-patient communication, and care coordination (5-9).

Historically, healthcare models were predominantly provider-centric, focusing on the efficiency of care delivery from the perspective of healthcare providers rather than the experiences of patients (10). However, the shift towards PCC began to gain momentum as evidence emerged showing that involving patients in their own care could lead to better health outcomes, higher patient satisfaction, and more efficient use of healthcare resources (11).

Patient-centered care encompasses several core principles, including respect for patients' values and preferences, coordination and integration of care, information, communication, and education, physical comfort, emotional support, involvement of family and friends, and continuity and transition (12). These principles aim to create a more collaborative environment where patients are active participants in their healthcare journeys, thus fostering a sense of ownership and responsibility towards their health.

Implementing patient-centered care across different healthcare settings presents unique challenges and opportunities. For instance, in the context of hospital discharge, Anthony and Hudson-Barr (2004) highlighted a model that focuses on ensuring that patients understand their discharge instructions, have access to necessary follow-up care, and feel confident in managing their health postdischarge. This model underscores the importance of clear communication and support during the transition from hospital to home, which is crucial for preventing readmissions and promoting recovery (11).

In outpatient settings, particularly in palliative care for cancer patients, Finlay et al. (2019) described various models of outpatient palliative care clinics that emphasize the need for personalized care plans, coordinated multidisciplinary teams, and ongoing patient and family support. These models highlight the adaptability of PCC principles to cater to the complex and evolving needs of patients with chronic and terminal illnesses (13).

The benefits of patient-centered care are welldocumented in the literature. Collins et al. (2009) demonstrated that different models of care for patients with diabetes, including PCC approaches, significantly impacted patients' quality of life and quality of care. Their study found that patients receiving care through PCC models reported higher satisfaction levels and better management of their condition, which in turn led to improved clinical outcomes (14). Similarly, Rosenberg et al. (2012) reported on a patient-centered medical home (PCMH) pilot program, showing that such models could enhance care coordination, improve patient outcomes, and reduce healthcare costs. The PCMH model focuses on providing comprehensive, coordinated, and continuous care, which aligns closely with the principles of PCC (7). In another study, Ewunetu et al. (2023) compared patients' perceptions of PCC in private and public hospitals, revealing that patients in private hospitals generally reported higher satisfaction with PCC aspects. This finding highlights the disparities in care quality across different healthcare settings and underscores the need for systemic changes to ensure equitable implementation of PCC (15).

Despite its benefits, the implementation of PCC is fraught with challenges. Liberati et al. (2015) discussed the organizational restructuring required to implement a patientcentered model in hospitals. They noted that successful implementation often necessitates significant changes in hospital policies, staff training, and cultural shifts towards valuing patient input and experiences. One major challenge is the resistance to change among healthcare providers and administrators who may be accustomed to traditional, provider-centric models of care. This resistance can stem from a lack of understanding of PCC principles, fear of increased workload, or skepticism about the efficacy of PCC (5). Therefore, addressing these concerns through education and demonstrating the tangible benefits of PCC is crucial for successful implementation. Resource limitations are another significant barrier. Implementing PCC requires adequate

staffing, training, and technological support, which can be challenging in resource-constrained settings (7). Ensuring that healthcare providers have the necessary resources and support to deliver patient-centered care is essential for its sustainability.

Different patient populations may require tailored approaches to PCC. For example, Yano et al. (2014) discussed the delivery of gender-sensitive comprehensive primary care to women veterans, highlighting the unique needs of this population and the importance of a patientaligned care team (PACT) model. The PACT model emphasizes personalized care, which is particularly important for addressing the specific health needs of women veterans, including those related to military service. In neonatal intensive care units (NICUs), family-centered care (FCC) is a specific adaptation of PCC that involves the active participation of families in the care of their infants. Maatman et al. (2020) identified factors influencing the implementation of FCC in NICUs, such as the need for family-friendly policies, staff training, and a supportive hospital environment. They found that successful implementation of FCC leads to better health outcomes for infants and increased satisfaction among families.

Effective implementation of PCC requires robust methods for measuring and evaluating its impact. Zlateva et al. (2015) developed the Medical Home Care Coordination Survey to assess care coordination from both patient and provider perspectives. Such tools are essential for identifying strengths and areas for improvement in PCC implementation, ensuring that care models can be refined and adapted to meet patient needs effectively. Similarly, Stone (2008) conducted a retrospective evaluation of the Planetree patient-centered model of care, examining its impact on inpatient quality outcomes. The study found that the Planetree model, which focuses on creating healing environments and fostering therapeutic relationships, led to significant improvements in patient satisfaction and quality of care. These findings underscore the importance of ongoing evaluation and adaptation of PCC models to maintain and enhance their effectiveness.

This study explores healthcare providers' perspectives on the implementation of patient-centered care (PCC) models in hospitals. It aims to identify key themes related to understanding, experiences, perceived benefits, and challenges associated with PCC to inform better practices and policies.

2. Methods and Materials

2.1. Study Design and Participants

This study employs a qualitative research design to explore healthcare providers' perspectives on the implementation of patient-centered care models in hospitals. A qualitative approach is chosen to gain in-depth insights into the experiences, beliefs, and attitudes of healthcare providers regarding patient-centered care.

Participants in this study are healthcare providers, including doctors, nurses, and administrative staff, working in various hospitals that have adopted patient-centered care models. The selection of participants is guided by purposive sampling to ensure that a diverse range of perspectives is represented. Inclusion criteria include having at least one year of experience in the current role and direct involvement in patient care or hospital administration.

The study aims to achieve theoretical saturation, whereby data collection continues until no new themes or insights emerge from the interviews. This approach ensures a comprehensive understanding of healthcare providers' perspectives and allows for the identification of patterns and commonalities across different participants.

2.2. Measures

2.2.1. Semi-Structured Interview

Data collection is conducted through semi-structured interviews, allowing for a flexible yet focused exploration of participants' views. An interview guide is developed to cover key topics such as the understanding of patient-centered care, experiences with its implementation, perceived benefits and challenges, and suggestions for improvement. However, interviewers are encouraged to follow the flow of conversation and explore relevant issues as they arise.

Interviews are conducted either in person or via video conferencing, depending on the participants' preferences and availability. Each interview lasts approximately 45 to 60 minutes and is audio-recorded with the participants' consent to ensure accurate transcription and analysis.

2.3. Data Analysis

The data from the interviews are transcribed verbatim and analyzed using NVivo software, which facilitates the organization, coding, and thematic analysis of qualitative data. The analysis follows a six-step process:

Familiarization with the Data: Researchers immerse themselves in the data by reading and re-reading the transcripts to gain a holistic understanding of the content.

Initial Coding: Transcripts are coded line by line to identify significant statements and phrases relevant to the research questions.

Generating Themes: Codes are grouped into broader themes that capture recurring patterns and insights across the interviews.

Reviewing Themes: Themes are reviewed and refined to ensure they accurately represent the data and are distinct from each other.

Defining and Naming Themes: Clear definitions and names are assigned to each theme to succinctly convey their essence.

Writing Up: The final themes are organized into a coherent narrative that addresses the research objectives and

provides a comprehensive understanding of healthcare providers' perspectives.

To ensure the trustworthiness of the study, several strategies are employed. These include member checking, where participants are given the opportunity to review and confirm the accuracy of their interview transcripts, and peer debriefing, where researchers discuss and validate their findings with colleagues. Additionally, a clear audit trail is maintained to document the research process and decisions made during data collection and analysis.

3. Findings and Results

The study included 21 participants, encompassing a diverse group of healthcare providers from various hospital departments. Of the participants, 10 were doctors, 7 were nurses, and 4 were administrative staff. The gender distribution included 12 females and 9 males. Participants' ages ranged from 28 to 58 years, with a mean age of 42 years. In terms of experience, 6 participants had between 1-5 years of experience, 8 had between 6-10 years, and 7 had over 10 years of experience in their respective roles. Additionally, 14 participants worked in urban hospitals, while 7 were from rural healthcare facilities.

Table 1

Categories, Si	<i>ubcategories</i> ,	and Concepts	ŝ
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Category	Subcategory	Concepts
Understanding of Patient-Centered Care	Definition and Key Elements	Holistic care, Individualized care, Empathy, Respect
	Healthcare Providers' Roles	Doctor's role, Nurse's role, Administrative support
	Patient Involvement	Shared decision-making, Patient autonomy, Family involvement
	Communication Practices	Effective communication, Listening skills, Non-verbal communication
	Cultural Competence	Cultural awareness, Sensitivity training, Inclusive practices
	Barriers to Understanding	Lack of awareness, Misconceptions, Conflicting definitions
	Training and Education	Continuous education, Workshops, Seminars
Experiences with Implementation	Initial Implementation Phases	Planning stages, Pilot programs, Policy development
	Staff Adaptation	Adaptation period, Acceptance, Resistance
	Resource Allocation	Funding, Staffing, Technological support
	Interdisciplinary Collaboration	Team meetings, Collaborative practice, Role clarity
	Feedback Mechanisms	Surveys, Patient interviews, Focus groups
Perceived Benefits	Improved Patient Satisfaction	Positive feedback, Patient testimonials, High satisfaction scores
	Enhanced Patient Outcomes	Recovery rates, Reduced readmissions, Improved health metrics
	Work Environment	Job satisfaction, Team cohesion, Professional growth
	Efficiency in Care Delivery	Streamlined processes, Reduced wait times, Optimized workflows
	Patient Trust and Engagement	Trust-building, Active listening, Engagement strategies
	Staff Morale	Motivation, Job fulfillment, Supportive environment
Challenges Faced	Resistance to Change	Fear of the unknown, Comfort with status quo, Change management
	Resource Limitations	Budget constraints, Limited staff, Insufficient facilities
	Training and Support	Training programs, Mentorship, Ongoing education
	Interpersonal Dynamics	Inter-staff relationships, Conflict resolution, Team dynamics
	Systemic Issues	Policy barriers, Administrative hurdles, System rigidity



3.1. Understanding of Patient-Centered Care

Definition and Key Elements: Healthcare providers generally described patient-centered care as an approach that emphasizes holistic care, individualized attention, empathy, and respect for patients. One physician noted, "Patientcentered care means treating the patient as a whole person, not just addressing their immediate medical needs."

Healthcare Providers' Roles: Different roles in the healthcare team were highlighted, with doctors, nurses, and administrative staff each contributing uniquely to patientcentered care. A nurse explained, "Our role is to ensure that patients feel heard and supported throughout their care journey, while doctors focus on the medical aspects and administrators manage the logistics."

Patient Involvement: Patient involvement was seen as critical, with shared decision-making, patient autonomy, and family involvement being central concepts. A healthcare provider commented, "We encourage patients to participate in their care decisions, which helps them feel more in control and engaged."

Communication Practices: Effective communication practices, including listening skills and non-verbal communication, were deemed essential for implementing patient-centered care. One interviewee mentioned, "Listening is key; sometimes, what a patient doesn't say is as important as what they do say."

Cultural Competence: Providers recognized the importance of cultural awareness, sensitivity training, and inclusive practices to cater to diverse patient populations. A respondent noted, "Understanding and respecting cultural differences is vital to providing effective and compassionate care."

Barriers to Understanding: Some barriers to understanding patient-centered care included a lack of awareness, misconceptions, and conflicting definitions among staff. One provider stated, "There are still many misconceptions about what patient-centered care actually involves, which can hinder its implementation."

Training and Education: Continuous education through workshops and seminars was highlighted as necessary for improving understanding and practice of patient-centered care. A participant shared, "Ongoing training is crucial to keep everyone updated on best practices and new developments."

3.2. Experiences with Implementation

Initial Implementation Phases: The initial phases of implementing patient-centered care involved planning stages, pilot programs, and policy development. One administrator described, "We started with a pilot program to test the waters before rolling out patient-centered care hospital-wide."

Staff Adaptation: Staff adaptation varied, with some quickly accepting the new model while others resisted. An interviewee reflected, "Change is always challenging, but over time, most staff members have adapted and see the benefits."

Resource Allocation: Adequate funding, staffing, and technological support were identified as critical for successful implementation. One nurse noted, "We need proper resources, including technology and sufficient staff, to effectively implement patient-centered care."

Interdisciplinary Collaboration: Effective implementation required team meetings, collaborative practice, and role clarity among different healthcare providers. A provider mentioned, "Interdisciplinary collaboration ensures that all aspects of patient care are covered, leading to better outcomes."

Feedback Mechanisms: Regular feedback mechanisms, such as surveys, patient interviews, and focus groups, were used to assess and improve patient-centered care practices. A respondent stated, "Patient feedback is invaluable for identifying areas where we can improve."

3.3. Perceived Benefits

Improved Patient Satisfaction: Positive feedback, patient testimonials, and high satisfaction scores were common indicators of the benefits of patient-centered care. One provider shared, "We've received overwhelming positive feedback from patients who feel more valued and understood."

Enhanced Patient Outcomes: Improved health metrics, including recovery rates and reduced readmissions, were noted as significant benefits. An interviewee said, "Since adopting patient-centered care, we've seen a noticeable improvement in patient outcomes." Work Environment: Enhanced job satisfaction, team cohesion, and professional growth were cited as benefits for healthcare providers. A nurse commented, "Working in a patient-centered environment has improved our team spirit and job satisfaction."

Efficiency in Care Delivery: Streamlined processes, reduced wait times, and optimized workflows contributed to more efficient care delivery. One administrator explained, "Patient-centered care has helped us reduce inefficiencies and deliver faster, more effective care."

Patient Trust and Engagement: Building trust and engaging patients through active listening and personalized care were key outcomes. A provider noted, "Patients are more likely to trust and engage with us when they feel their individual needs are being met."

Staff Morale: Increased motivation, job fulfillment, and a supportive environment were highlighted as benefits for staff morale. An interviewee reflected, "Knowing that we are making a real difference in patients' lives boosts our morale and motivation."

3.4. Challenges Faced

Resistance to Change: Resistance to change, including fear of the unknown and comfort with the status quo, was a common challenge. One healthcare provider mentioned, "There's always some resistance when implementing new practices, but ongoing support helps mitigate this."

Resource Limitations: Budget constraints, limited staff, and insufficient facilities were significant barriers to implementation. A respondent stated, "Resource limitations, particularly in terms of staffing and budget, are major hurdles we face."

Training and Support: Adequate training programs, mentorship, and ongoing education were necessary to support staff. One nurse shared, "Continuous training and mentorship are essential to help staff adapt to new patientcentered care practices."

Interpersonal Dynamics: Inter-staff relationships, conflict resolution, and team dynamics played a crucial role in the implementation process. An interviewee noted, "Effective interpersonal dynamics and conflict resolution strategies are vital for a cohesive team."

Systemic Issues: Policy barriers, administrative hurdles, and system rigidity were systemic issues that impeded the implementation of patient-centered care. One administrator explained, "Systemic issues, such as outdated policies and rigid administrative procedures, often slow down the implementation process."

4. Discussion and Conclusion

The study aimed to explore healthcare providers' perspectives on the implementation of patient-centered care (PCC) models in hospitals through qualitative research. The findings revealed several key themes, including the understanding of PCC, experiences with its implementation, perceived benefits, and challenges faced.

Healthcare providers generally defined PCC as an approach emphasizing holistic, individualized care characterized by empathy and respect. They acknowledged their specific roles in fostering PCC, highlighted the critical involvement of patients and their families, and stressed the importance of effective communication and cultural competence. Providers also identified barriers to understanding PCC and emphasized the need for continuous training and education.

Regarding the implementation experiences, providers discussed the initial phases involving planning and policy development, adaptation challenges, resource allocation issues, the necessity for interdisciplinary collaboration, and the use of feedback mechanisms to refine PCC practices. They highlighted several benefits, including improved patient satisfaction and outcomes, better work environments, enhanced efficiency in care delivery, increased patient trust and engagement, and improved staff morale.

However, providers also faced significant challenges, such as resistance to change, resource limitations, training and support deficiencies, interpersonal dynamics issues, and systemic barriers.

The understanding of PCC among healthcare providers, as revealed in this study, aligns with the core principles outlined by Jayadevappa and Chhatre (2011), who emphasized holistic care and the importance of addressing patients' individual needs and preferences (12). This study's findings that effective communication and cultural competence are critical components of PCC echo the sentiments of Anthony and Hudson-Barr (2004), who stressed the necessity of clear communication during



hospital discharge to ensure continuity of care and patient confidence (11).

Experiences with implementation varied, with initial phases requiring thorough planning and the development of pilot programs, as discussed by Liberati et al. (2015). Their study underscored the need for organizational restructuring to support PCC, which was also evident in the present study (5). The adaptation phase, involving both acceptance and resistance among staff, reflects the challenges highlighted by Rosenberg et al. (2012), who noted similar resistance during the adoption of the patient-centered medical home model (7).

The critical role of resource allocation, including funding, staffing, and technological support, aligns with findings by Ewunetu et al. (2023), who reported that resource disparities between private and public hospitals affected patients' perceptions of PCC (15). Interdisciplinary collaboration, crucial for successful PCC implementation, was also emphasized by Finlay et al. (2019) in the context of outpatient palliative care clinics, highlighting the necessity for coordinated, multidisciplinary teams (13).

The perceived benefits of PCC identified in this study, such as improved patient satisfaction and outcomes, mirror those reported by Collins et al. (2009), who found that PCC models significantly enhanced the quality of life and care for patients with diabetes (14). Similarly, the positive impact on staff morale and work environment aligns with the findings of Stone (2008), who noted improvements in inpatient quality outcomes and staff satisfaction with the Planetree model of PCC (10).

Challenges such as resistance to change and resource limitations are consistent with the literature. Liberati et al. (2015) discussed similar organizational and cultural barriers to PCC implementation (5), while Rosenberg et al. (2012) noted the challenges in securing adequate resources for PCC models (7). Training and support deficiencies, highlighted in this study, resonate with Maatman et al. (2020), who emphasized the need for continuous education and mentorship to support family-centered care in neonatal intensive care units (16).

Despite the valuable insights gained from this study, several limitations must be acknowledged. First, the qualitative nature of the research, while providing in-depth perspectives, limits the generalizability of the findings. The study's sample size of 21 participants, though sufficient for qualitative analysis, may not represent the broader population of healthcare providers. Additionally, the study focused on hospitals that had already adopted PCC models, potentially overlooking the perspectives of providers in institutions where PCC is not yet implemented or is in early stages of adoption.

Furthermore, the reliance on self-reported data through interviews introduces the possibility of response bias, where participants may provide socially desirable answers rather than candid reflections of their experiences and opinions. Finally, the study did not account for variations in PCC implementation across different departments within hospitals, which could offer a more nuanced understanding of the challenges and benefits experienced by specific provider groups.

Future research should aim to address the limitations identified in this study by expanding the sample size and including a more diverse range of healthcare providers from various settings, including those where PCC is not yet implemented. Quantitative studies could complement qualitative findings by measuring the impact of PCC on patient outcomes, staff satisfaction, and organizational efficiency using standardized metrics.

Additionally, longitudinal studies tracking the implementation process of PCC over time could provide valuable insights into the long-term benefits and challenges, helping to identify strategies for sustaining and improving PCC practices. Research should also explore the impact of PCC on specific patient populations, such as those with chronic conditions, mental health issues, or from diverse cultural backgrounds, to tailor PCC models more effectively to meet their unique needs.

Further investigation into the role of technology in supporting PCC, such as electronic health records, telehealth, and patient portals, could also provide important insights into how digital tools can enhance patient-provider communication, care coordination, and patient engagement. Finally, comparative studies between different healthcare systems and countries could offer a broader perspective on the factors influencing PCC implementation and outcomes globally.

To enhance the implementation of PCC in hospitals, several practical recommendations can be drawn from this



study. First, healthcare organizations should invest in continuous education and training programs for all staff members, emphasizing the principles and practices of PCC. Workshops, seminars, and mentorship programs can help address knowledge gaps and foster a culture of patient-centered care.

Effective communication strategies should be prioritized, including training in active listening, empathy, and nonverbal communication skills. Creating interdisciplinary teams and facilitating regular team meetings can improve collaboration and ensure that all aspects of patient care are addressed holistically. Healthcare organizations should also strive to allocate adequate resources, including staffing, funding, and technological support, to support the successful implementation of PCC.

Feedback mechanisms, such as patient surveys and focus groups, should be established to continuously assess and improve PCC practices. Involving patients and their families in care planning and decision-making processes can enhance patient engagement and satisfaction. Additionally, healthcare leaders should work to address systemic barriers by advocating for policy changes that support PCC and creating flexible administrative procedures that facilitate its implementation.

Finally, fostering a supportive work environment that values staff input, provides opportunities for professional growth, and recognizes the contributions of all team members can enhance staff morale and motivation, ultimately leading to better patient care. By adopting these practices, healthcare organizations can create a more patientcentered approach to care, benefiting both patients and providers.

Authors' Contributions

O.P.-R. conceptualized the study, designed the research methodology, and supervised the data collection process. G.O. conducted the semi-structured interviews, assisted in transcribing the audio recordings, and contributed to the thematic analysis using NVivo software. V.K., the corresponding author, led the data analysis, interpreted the findings, and took the lead in drafting and revising the manuscript. D.G. supported the recruitment of participants, contributed to the literature review, and helped in refining the key themes. All authors participated in discussing the findings, critically reviewed the manuscript for important intellectual content, and approved the final version for publication.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

The study placed a high emphasis on ethical considerations. Informed consent obtained from all participants, ensuring they are fully aware of the nature of the study and their role in it. Confidentiality strictly maintained, with data anonymized to protect individual privacy. The study adhered to the ethical guidelines for research with human subjects as outlined in the Declaration of Helsinki.

References

 Clark KB. Smart Device-Driven Corticolimbic Plasticity in Cognitive-Emotional Restructuring of Space-Related Neuropsychiatric Disease and Injury. Life [Internet]. 2022; 12(2).
Hoseini M. Patient Experiences with AI in Healthcare

^{4.} Yousefi Z, Saadati N, Saadati SA. AI in Elderly Care: Understanding the Implications for Independence and Social



Settings. AI and Tech in Behavioral and Social Sciences. 2023;1(3):12-8.

^{3.} Qiu H, Piskorz-Ryń O. Understanding Patient Adherence to Hypertension Management Guidelines. KMAN Counseling & Psychology Nexus. 2024;2(1):70-6.



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Interaction. AI and Tech in Behavioral and Social Sciences. 2023;1(4):26-32.

5. Liberati EG, Gorli M, Scaratti G. Reorganising Hospitals to Implement a Patient-Centered Model of Care. Journal of Health Organization and Management. 2015;29(7):848-73.

6. Orsolini L, Pompili S, Volpe U. Schizophrenia: A Narrative Review of Etiopathogenetic, Diagnostic and Treatment Aspects. Journal of Clinical Medicine [Internet]. 2022; 11(17).

7. Rosenberg CN, Peele PB, Keyser DJ, McAnallen S, Holder D. Results From a Patient-Centered Medical Home Pilot at UPMC Health Plan Hold Lessons for Broader Adoption of the Model. Health Affairs. 2012;31(11):2423-31.

8. Yano EM, Haskell SG, Hayes PM. Delivery of Gender-Sensitive Comprehensive Primary Care to Women Veterans: Implications for VA Patient Aligned Care Teams. Journal of General Internal Medicine. 2014;29(S2):703-7.

9. Zlateva I, Anderson D, Coman E, Khatri K, Tian T, Fifield J. Development and Validation of the Medical Home Care Coordination Survey for Assessing Care Coordination in the Primary Care Setting From the Patient and Provider Perspectives. BMC Health Services Research. 2015;15(1).

10. Stone S. A Retrospective Evaluation of the Impact of the Planetree Patient-Centered Model of Care on Inpatient Quality Outcomes. Herd Health Environments Research & Design Journal. 2008;1(4):55-69.

11. Anthony MK, Hudson-Barr D. A Patient-Centered Model of Care for Hospital Discharge. Clinical Nursing Research. 2004;13(2):117-36.

12. Jayadevappa R, Chhatre S. Patient Centered Care - A Conceptual Model and Review of the State of the Art. The Open Health Services and Policy Journal. 2011;4(1):15-25.

13. Finlay E, Newport K, Sivendran S, Kilpatrick L, Owens MD, Buss MK. Models of Outpatient Palliative Care Clinics for Patients With Cancer. Journal of Oncology Practice. 2019;15(4):187-93.

14. Collins M, O'Sullivan T, Harkins V, Perry IJ. Quality of Life and Quality of Care in Patients With Diabetes Experiencing Different Models of Care. Diabetes Care. 2009;32(4):603-5.

15. Ewunetu M, Temesgen W, Zewdu D, Andargie A, Kebede M, Lidetu T. Patients' Perception of Patient-Centered Care and Associated Factors Among Patients Admitted in Private and Public Hospitals: A Comparative Cross-Sectional Study. Patient Preference and Adherence. 2023;Volume 17:1035-47.

16. Maatman SMO, Bohlin K, Lilliesköld S, Garberg HT, Uitewaal-Poslawky I, Kars MC, Hoogen Avd. Factors Influencing Implementation of Family-Centered Care in a Neonatal Intensive Care Unit. Frontiers in Pediatrics. 2020;8.

