

Recent trend in the care of chronic kidney disease patients: A shift from paternalistic to collaborative approach



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ABSTRACT

The global rise in chronic kidney disease (CKD) necessitates a re-evaluation of healthcare practices. This review explores the shift from paternalistic to collaborative model, focusing on patient empowerment. This article aims to elucidate the foundational concept of patient empowerment, describe the goals of patient-centered care (PCC), identify barriers to PCC implementation, and propose strategies to enhance PCC. The ultimate aim is to empower CKD patients in self-care. The article explores multifaceted strategies of PCC, highlights the pivotal role of shared decision-making, and underscores the necessity of a collaborative clinician-patient partnership. It emphasizes the significance of patient-centered education, benefits of PCC in CKD care, and the role of artificial intelligence in improving healthcare outcomes. This review concludes by summarizing insights into the transformative shift toward patient-centered approaches in CKD management. It emphasizes the positive impact of this paradigm shift on both the healthcare system and CKD patients. The findings highlight the positive effects of PCC on both the health-care system and CKD patients.

Key words: Artificial intelligence; Chronic kidney disease; Collaborative approaches; Paternalistic care; Patient-centered care; Shared decision-making

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INTRODUCTION

Globally, the prevalence of chronic kidney disease (CKD) is increasing persistently over the past 50 years. As a cause of mortality, the ranking has escalated from 17th in 1990 to 12th in 2017.^{1,2} This growing incidence, coupled with CKD's complex comorbidities and an aging population, challenges health-care systems.³ Traditional paternalistic models of care, where health-care providers make decisions with little patient input, are increasingly insufficient for managing CKD. In response, a shift toward a patient-centered care (PCC) approach in CKD management has emerged. This approach encompasses four key principles: (i) Care delivered with dignity, compassion, and respect; (ii) well-coordinated care; (iii) personalized care addressing clinical,

social, emotional, and practical needs; and (iv) enabling individuals to take an active role in their own care.⁴ Involving a multidisciplinary team, including primary care physicians, nephrologists, nurses, dietitians, and community health workers, PCC provides comprehensive and personalized treatment plans.⁵ This model fosters shared decision-making (SDM), enhances patient education, and enables self-management, leading to improved health outcomes and quality of life (QOL) for CKD patients.⁶ Implementing PCC is crucial in low and middle-income countries, where innovative and sustainable health-care practices are needed due to resource constraints.⁷ Patients achieve better outcomes when they are empowered to participate actively in their own care, making effective patient education a crucial aspect of healthcare.⁸

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PARADIGM SHIFT: PATERNALISTIC TO COLLABORATIVE APPROACH

The term “paternalism” derived from the Latin word “*pater*” means “*father*.” Paternalistic approach in healthcare reflects a model where physicians make decisions for patients, assuming patients lack sufficient knowledge about their treatment.⁹ This model prioritized physician authority over patient autonomy. In contrast, the PCC model emphasizes collaboration, where patients are well-informed and actively participate in decision-making. This approach ensures care aligns with patients’ desires, needs, and preferences, fostering greater patient engagement and autonomy.¹⁰ However, in the 21st century, SDM and patient empowerment have become essential components of CKD management. SDM involves medical choices being made collaboratively, guided by clinical evidence provided by the clinician and the values and preferences of the patient. Patient empowerment is defined as “a process through which people gain greater control over decisions or actions affecting their health.” This means that patients should have enough knowledge to actively participate in SDM with their clinicians and possess the skills and support needed for effective self-management of CKD.¹¹ According to the World Health Organization (WHO), patient empowerment involves engaging patients in decision-making and actions regarding their health, leading to better outcomes. Patient empowerment can be fostered by providing comprehensive CKD-related information and education, as well as fully engaging patients in the decision-making processes concerning their care. Effective empowerment aims to minimize CKD-related symptoms, thereby enhancing patient satisfaction, health-related QOL, and overall life participation.¹¹ This approach helps patients understand their roles, gain knowledge for SDM, and develop self-management skills.¹² Active patient involvement reduces anxiety, shortens hospital stays, and fosters a safer health-care environment.^{7,13-15} Shifting from a provider-centric model to PCC is vital, especially in culturally diverse communities.¹⁶ PCC places patients at the center, actively involving them in their care and integrating biological, psychological, and social factors.¹⁰ This holistic approach empowers patients, enhances satisfaction, and improves overall well-being through collaborative and tailored care.¹⁷

PCC has been described using various terms such as family-centered care, relationship-centered care, personalized care, and client-centered care. The terms “patient-centered”, “people-centered”, “person-centered”, and “relationship-centered” are used interchangeably within healthcare and research.¹⁸ Irrespective of the terminology, these approaches share common elements such as empathy,

respect, engagement, building relationship, effective communication, SDM, a holistic view, an individualized focus, and coordinated care.¹⁹

WHAT ARE THE BARRIERS OF PCC?

Despite the widespread acceptance of the PCC philosophy, its practical implementation faces challenges. Physicians may lack awareness on how their communication styles may differ based on the individual characteristics of their patients. This lack of awareness referred to as implicit bias, which unconsciously affect the understanding, actions, and decisions.²⁰ Several factors act as barriers to effective PCC (Table 1).

FACILITATORS OF PCC

Practical implementation of PCC can be challenging. Proper attention on certain elements can facilitate the PCC practices. These facilitators of PCC are enlisted in Table 2.

HOW TO IMPROVE COMMUNICATION FOR PCC

To cater the PCC efficiently, clinician should adopt several strategies. Communication begins with active listening. Patients feel respected when clinician actively listen to patient and comprehend their needs and concerns. This approach entails viewing patients as individuals with a lifeworld, encompassing experiences and connections that shape their world.²⁵ Involving individuals by enhancing their power and responsibility is an important step. Besides, it is essential to integrate and align the services.²⁶ Restructuring the model of care and establishing a facilitating environment is also of paramount importance.^{27,28} The biopsychosocial model emphasizes caring for the whole person, considering both mind and body. In this model, the clinician views the patient as a unique individual and conducts a comprehensive diagnosis, rather than focusing solely on localized illness.²⁹

Health-care providers (HCPs) must consider the patient’s cultural background, various elements such as ethnicity, race, gender, age, socioeconomic class, education, religion, sexual orientation, identification, and physical ability, as well as acknowledging the unequal distribution of power and the existence of social disparities.²⁰ Hence, developing a treatment plan collaboratively is not only patient-centered but also culturally sensitive.²⁰ The schematic diagram (Figure 1) depicts the underpinning process of PCC.

Continual training of HCPs is necessary to improve their knowledge, attitude, and communication skill toward patients with flexibility in care and response to the

Table 1: The barriers of PCC implementation

Barriers	Explanation	Author and year
Time constraint	Health care providers (HCPs) often cannot afford adequate time to listen properly, explain, and discuss with their patients.	Roodbeen et al. ²¹ (2020)
Paucity of knowledge of patients	Negotiation with patients regarding evidence-based treatment plans can become difficult due to a lack of knowledge. Patients should understand clinical and laboratory parameters as the markers of the disease outcome. Many patients are not aware of these numerical indicators.	Naughton ¹⁰ (2018)
Attitude of HCPs	The attitude of the HCPs can also affect the patient-centered communication. Patients can get interruption to express their concerns fully due to frequent interruption by HCPs.	Naughton ¹⁰ (2018)
Motivation of HCPs	Some providers believe they are already practicing person-centered approach, leading to resistance toward further initiatives toward implementing PCC.	Stubbe ²⁰ (2020)
Cultural competence	Disparities in cultural values, variations in patients' preferences regarding doctor-patient relationships, racism, the effect of perceptual biases, and linguistic barriers all can put challenges for effective communication.	Stubbe ²⁰ (2020)
Excess of empathy	While empathy is valuable in PCC, an excess can appear unfair to patients not receiving the same level of care and may violate the ethical principles.	Summer Meranius et al., ¹⁴ (2020); Schuttner et al., ²² (2022).

PCC: Patient-centered care

Table 2: Factors contribute as facilitators during PCC

Facilitators	Explanation	Author and Year
Effective communication between patient and HCP	Direct, open communication is vital for multi-morbid patients to discuss their issues and care coordination.	Schuttner et al., (2022) ²²
Access to health care services	Access, or the perceived ability to access healthcare, coupled with effective communication, facilitates the establishment of patient goals during care plans, particularly due to the high volume of care needs.	Schuttner et al., (2022) ²²
Coordination of care	Care coordination addresses the care requirements of patients with multiple symptoms through team-based efforts. Thus, it effects on patients' trust and engagement.	Vennedey et al., (2020) ²³
Multidisciplinary teamwork	Involvement of different team is crucial to achieve PCC goals. Effective utilization of facilities for patient care intersects with the principles of patient-centered access and continuity of care.	Vennedey et al., (2020) ²³
Integration of care- medical and ancillary services	Consideration of both clinical context and psychosocial issues is crucial in delivering PCC for multi-morbid patients.	Schuttner et al., (2022) ²²
Training and education of the HCPs	Periodic staff training is necessary to orient newly employed staff to PCC issues. Problem-based learning can enhance understanding of PCC.	Vennedey et al., (2020) ²³ Nkrumah and Abekah-Nkrumah, (2019) ²⁴
Individual attributes of HCPs	HCPs must demonstrate genuine interest and understanding toward patients' complaints and needs. Empathy, positive attitude, listening with attention, and allowing sufficient time can enhance information sharing and patient engagement.	Schuttner et al., (2022) ²²
Facilities in healthcare	Facilities such as clean room, modern equipment, maintaining privacy during hospital stays, provision of separate rooms for examinations and consultations with HCPs can facilitate PCC. Use of information technology is important to keep track on patients' clinical information between departments during multidisciplinary approach.	Nkrumah and Abekah-Nkrumah, (2019) ²⁴

HCPs: Health care providers, PCC: Patient-centered care

patient's needs and values.³⁰ Some aspects are important for developing cultural competence (Table 3).

SHARED DECISION MAKING

In the paternalistic model, HCPs determine the best course of action for the patient based on their assessment of beneficence and non-maleficence.³³ On the other hand, the informed model places the responsibility on the patient to decide independently after receiving information from the

HCPs.³³ SDM lies between those two models of decision-making. In a person-centered approach, the priority is to establishment of mutual care before considering specific treatment options.³⁴ At the foundation of PCC lies the SDM, an approach in which HCPs and patients collaboratively strive to comprehend the patient's life circumstances and health.³ SDM is a collaborative approach in healthcare where the patient and clinician jointly make decisions about treatment options.³⁵ The SDM model emphasizes involving both the patient and the HCPs, focusing on their partnership in the decision-making

Table 3: Essential elements of cultural competence for PCC		
Elements	Explanation	Author and year
Warm greetings	Greet the patient by name, with a smile, being attentive, and maintaining appropriate eye contact to establishing rapport and build a positive relationship.	Stubbe ²⁰ (2020)
Show genuine interest	Show genuine interest in understanding the patient and actively engage in co-constructing a plan tailored to their needs.	Kwame and Petrucka, ³¹ (2021)
Clear communication	Clearly communicate that the process is collaborative and encourage the patient to share input on it.	Gantayet-Mathur et al., ³² (2022)
Collaborative and mutual partnership	Patients from diverse culture require an open and self-reflective approach in understanding their strengths and difficulties. This process involves co-constructing a treatment plan.	Stubbe ²⁰ (2020)
Consider patient's religion, background, practices, and culture	Instead of making assumptions, explore the difficulties they face during their engagement in the planning and execution process. Inquire about their religion, background, resilience factors, practices, and culture to avoid stereotyping.	Stubbe ²⁰ (2020)
Initiate a discussion	Assess the patient's understanding and familiarity with the concept. Seek patient input on healthcare decisions, especially for those accustomed to physicians' decisions, and gradually encourage their participation in decision-making.	Stubbe ²⁰ (2020)
Simple language and adequate time.	Use plain, non-medical language and allow sufficient time for communication. Patients can restate information in their own words to improve the communication.	Naughton ¹⁰ (2018)

PCC: Patient-centered care

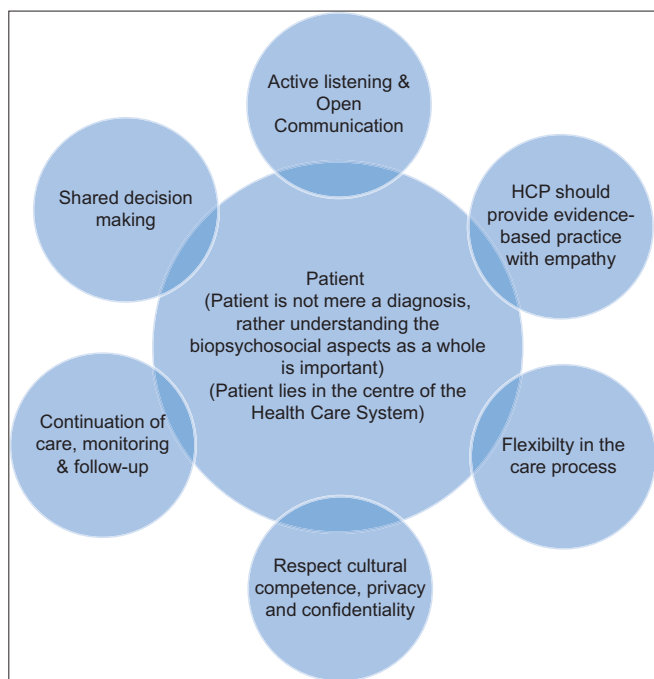


Figure 1: The schematic diagram showing patient-centered care and factors influencing it. In this model, the patient is the center of attention. All other factors are like the satellites. Activities of health care providers and organizations focus on the patient

process.³⁴ This partnership explores the patient's values, preferences, and the pros and cons of various options.²¹

REFLECTIVE DISCUSSION

PCC can improve the quality of healthcare by incorporating patients' values, preferences, needs, and goals into the

process of decision-making and service delivery. The WHO considered PCC as an important model of care, ensuring coordination across the entire spectrum of care.³⁶ Inadequate patient education about kidney disease leads to low awareness among patients and family members. Patient-centered education correlates with positive outcomes, such as higher rates of pre-dialysis care and satisfaction in CKD patients.³⁷ Early education, strong interpersonal relationship between HCPs and patients, and patient-centered communication can empower patients to manage CKD effectively.³⁸ This approach involves preventive care, lifestyle modifications, proper mental health services, and timely referrals. Use of personalized risk calculators and web-based tools can enhance early education, particularly for patients with limited health literacy or in rural areas.

CKD patients need effective management of symptoms to enhance their QOL. The PCC approach prioritizes patient preferences and the understanding of symptom clusters.³⁹ In the context of kidney diseases, PCC is a paradigm shift that considers the evolving preferences and values of patients, which may vary according to the stages of disease.⁶

Patient-centered kidney care offers several advantages, such as improved healthcare quality, cost effectiveness, and increased satisfaction among individuals, families, and HCPs. This collaborative approach focuses on improving the dialysis experience and promoting home dialysis.⁴

In a cross-sectional study Abdolsattari et al.,⁴⁰ found that there is further scope of improvements in the fields of safety and excellence. The environment of hemodialysis

unit can influence the satisfactory implementation of person-centered process. A team-based approach to PCC could yield comparable outcomes even in sicker patients like the younger and less advanced CKD patients.⁴¹ Both patients and their family members should involve actively in meetings to contribute in the planning and implementation of care.⁴² Certain patient-centered themes emerged from the data such as decision-making regarding treatment, transition of care according to stages of disease, and patient-centered outcomes.

The context of clinical encounters and the relation between patients and clinicians can influence the practices and experiences of PCC.³ The physical settings, time constraints, insufficient training of HCPs in new skills, and restrictive data protection laws that hinder documentation and information sharing can influence the sustainable implementation of PCC, especially with multiple comorbidities.¹⁷

USE OF ARTIFICIAL INTELLIGENCE (AI) IN CKD PATIENTS

Recently much emphasis is given in developing AI-based predictive models. However, it is paramount important to build a specialized team involving specialists in data engineering, HCPs, and patients to yield a solution that can benefit all stakeholders.⁴³ The effectiveness of these models depends on the ability to foresee the ensuing clinical trajectory. However, interventions must be customized based on the unique patient profile to generate the favorable outcome.⁴⁴

AI-based virtual coaches can help in rendering personalized medical guidance, thus implementing PCC. As CKD patients have high incidences of hospitalization due to their multimorbidity, early detection and management of progression are crucial for positive outcomes.⁴³

Machine learning (ML) techniques have emerged as valuable tools for enhancing clinical decision-making. Early detection of ensuing complication facilitates early intervention thereby averting further complications. This can help in the advanced care planning and ultimately enhancing patient outcomes.^{43,45}

Using the data mining process, the medical information such as estimated glomerular filtration rate, age, diet, and biochemical parameters can be translated to ML algorithms, which identify the severity of the disease, thus helps in clinical decision making, referral, and further course of action. The primary goal is to assess the need of dialysis

or kidney transplantation that needs adequate preparation of both patient and family members.⁴⁶

However, the use of AI in CKD management must balance potential benefits with safeguards against errors.⁴⁷ AI algorithms need validation with multitude of datasets to enhance its accuracy and minimize biases.⁴⁸ A strict regulatory standard, ethical guidelines, and legal framework is warranted to ensure the safe use of AI in healthcare.⁴⁹

AI models are never 100% accurate, and thus, there will be instances where models will predict incorrectly.⁴³ Provision of fail-safe mechanisms and human monitoring is crucial. Thus, clinicians must have the opportunity to verify and intervene any erroneous decisions.⁵⁰

Before integrating AI solutions into nephrology clinics, it is imperative to address the issues regarding policies and regulations. AI can assist in rendering PCC but cannot replace the nephrologists' role in clinical decision-making.⁴³ Physicians should regularly evaluate AI tools for accuracy, maintain open communication with patients regarding decision-making processes, and ensure the privacy of patient data.⁵¹

AI-THE VIRTUAL HEALTH ASSISTANT!

Recently, AI is emerging as an important tool in patient-centered health care. AI can personalize treatment plans by analyzing large amounts of patient data to identify the most effective interventions. Predicting models can foresee complications, enable proactive care, and reduce hospitalizations.^{44,46} Early detection and managing the progression of CKD may result positive patient outcome and reduce health-care costs.⁴⁵ AI can also enhance communication between patients and health-care providers, ensuring that every decision regarding treatment must align with patient preferences and needs.⁵¹ Thus, AI can make healthcare more personalized, and efficient patient care. Clinicians can use AI-based models as assisting tool while rendering PCC for CKD patients.⁴³ AI-driven virtual health assistants can provide continuous support and education, thus enabling the patients in self-management.⁵²

Future studies could focus to evaluate the effectiveness of AI-driven advance care planning tools in improving patient satisfaction and health outcomes. Furthermore, studies can evaluate the impact of AI-assisted communication on patient engagement and adherence to treatment plans. There is a scope for qualitative study on perception of patients and clinician about use of AI in health-care communication.

CONCLUSIONS

PCC helps individuals in expressing own decisions aligning with their personal goals and values. This approach focuses on various patient-centered outcomes, such as preserving dignity, showing respect, and fostering effective communication. AI fosters PCC by providing personalized recommendations based big data analysis and feedback.

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