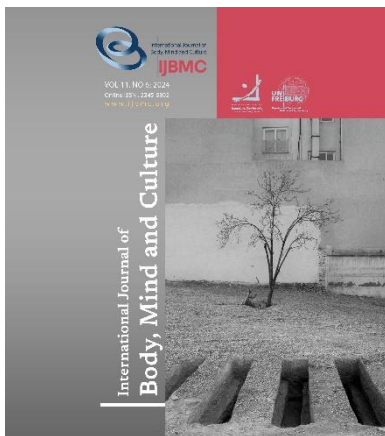


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# Bridging Theory and Practice in Cardiac Care: The Role of Transition Theory in Designing Patient-Centered Interventions

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## ABSTRACT

**Objective:** This study aims to explore how Transition Theory can inform the design of effective, patient-centered interventions in cardiac care.

**Methods and Materials:** A narrative review was conducted to synthesize literature published between 2014 and 2024, focusing on how Transition Theory applies to cardiac care transitions, including hospital discharge, rehabilitation, and home-based management. Studies were identified through electronic database searches and screened based on relevance to Transition Theory, cardiac rehabilitation, and patient-centered care. Descriptive analysis was employed to categorize the findings, with particular attention to the physical, emotional, and social dimensions that influence patient experiences. Special emphasis was placed on identifying key transition points and integrating theoretical constructs into practical interventions that address both immediate clinical needs and long-term adaptation.

**Findings:** The review highlighted that applying Transition Theory to cardiac care offers a more comprehensive understanding of how patients navigate significant health changes. It revealed that common transition points, such as moving from hospital to home or graduating from a structured rehabilitation program, are critical periods that can either facilitate recovery or increase risk of setbacks. Patient-centered interventions that incorporate elements of Transition Theory—such as individualized education, psychosocial support, and interdisciplinary coordination—were associated with enhanced adherence, improved clinical outcomes, and greater patient satisfaction. However, the review also identified challenges, including organizational constraints, limited provider training, and the need for better integration of theory-based practices across diverse healthcare settings.

**Conclusion:** Transition Theory provides a valuable framework for understanding and supporting the multifaceted transitions that cardiac patients experience. Tailoring interventions to each patient's evolving needs has the potential to improve continuity of care, encourage self-management, and ultimately reduce readmissions. Further research should focus on empirically validating theory-driven interventions and developing interdisciplinary models that incorporate social determinants and technological innovations.

**Keywords:** Transition Theory, cardiac care, patient-centered interventions, cardiac rehabilitation, healthcare transitions.

## Introduction

Cardiac conditions remain a pervasive cause of morbidity and mortality worldwide, placing a significant burden on healthcare systems and challenging patients, families, and providers throughout the continuum of care (Bellmann et al., 2020). Despite advances in medical and surgical interventions, the rising prevalence of coronary artery disease, heart failure, and other cardiovascular disorders underscores the need for more integrative approaches that address not only acute treatment but also long-term management (Amiri et al., 2023; Khodadad Hatkeposhti et al., 2022; Kitagawa et al., 2020). Complications such as frequent hospital readmissions, slow recovery, diminished quality of life, and increased healthcare expenditures are often tied to suboptimal coordination during transitions of care (Dunlay et al., 2014). These transitional periods, whether from acute hospital settings to rehabilitation centers or from rehabilitation programs to independent home-based regimens, are delicate junctures in which patients are vulnerable to incomplete recovery, fragmented care, and insufficient support. The complexities inherent in these transitions stem from the multifaceted nature of cardiac conditions, which may involve comorbidities, complicated medication regimens, and the psychosocial strains that accompany serious illnesses (D'Eath et al., 2018). Taken together, these factors highlight the pressing need to systematically address care transitions in cardiac populations, recognizing their direct influence on patient outcomes and overall recovery trajectories (Nso et al., 2022).

Ongoing efforts to improve cardiac care increasingly emphasize the importance of patient-centered interventions, which are designed to align with individuals' needs, preferences, and unique social contexts (Bradley et al., 2017). Such interventions move beyond traditional, protocol-driven models by placing patients at the core of the decision-making process, thereby facilitating greater engagement and self-efficacy (Hamedani et al., 2019). Given that cardiac rehabilitation and long-term disease management require both clinical oversight and active patient participation, patient-centered care has emerged as a cornerstone of effective cardiovascular treatment (Carolina Santiago de Araújo et al., 2019). Programs integrating telehealth and home-based components exemplify this shift, offering

accessible, flexible pathways for ongoing monitoring and empowerment (Ávila et al., 2019). Such models seek to bolster adherence and long-term sustainability of therapeutic gains by proactively involving patients in goal-setting, symptom tracking, and lifestyle modifications (Xiao et al., 2021). Yet, even with these developments, many patients still face inadequate support in navigating critical transitions, which can undermine the very improvements that these interventions aim to achieve (Xiao et al., 2021). Poor coordination, lack of tailored education, and insufficient psychosocial resources can leave patients and their families feeling ill-equipped to manage evolving care demands, demonstrating that patient-centered interventions must account for the entire continuum, including pre-discharge planning, structured outpatient rehabilitation, and community reintegration (Dinesen et al., 2019; Dinesen & Spindler, 2018). Consequently, refining transitional support is integral to the success of patient-centered models, as it offers a pivotal touchpoint for reducing the likelihood of adverse outcomes and bolstering patient engagement over time (Medina-Quero et al., 2017).

Despite clear recognition of the need for improved care transitions and patient-centered strategies, considerable challenges remain in translating theoretical frameworks into everyday clinical practice. Transition Theory, which provides a structured lens for understanding how individuals move through significant health-related changes, highlights the dynamic processes of adaptation, coping, and role redefinition (Dai et al., 2022). This theoretical perspective underscores that each transition is influenced by an interplay of personal, community, and healthcare system factors, all of which can either facilitate or hinder successful progression toward a stable new normal (Jeffares et al., 2019). However, healthcare practitioners frequently struggle to operationalize such frameworks, partly due to limited training in theoretical application and partly because of the complexity of healthcare systems themselves (Birke et al., 2022). In the context of cardiac care, the high-risk and time-sensitive nature of the conditions may compel providers to focus primarily on medical stabilization and immediate post-discharge recommendations, inadvertently overlooking the importance of sustained transitional support (Dinesen et al., 2019; Dinesen & Spindler, 2018). Additionally,

resource constraints and institutional policies may hamper the integration of a theoretical model that demands a more individualized and process-oriented approach, leading to standardized interventions that fail to account for varying patient trajectories (Puri, 2023). Although comprehensive guidelines and evidence-based protocols for cardiac rehabilitation do exist, their implementation often lacks the nuanced strategies necessary to address diverse patient needs, further illustrating the gap between conceptual ideals and practical realities (Taylor et al., 2023). Consequently, many cardiac patients encounter fragmented pathways of care that do not fully harness the potential offered by theoretical insights into transition processes (Frederix et al., 2014).

Thus, the purpose of this review is to explore how Transition Theory can be actuated to design more effective, patient-centered interventions in cardiac care. In this regard, home-based and telehealth modalities, psychosocial support, and coordinated care models, this review aims to address the ways in which theoretical concepts regarding transitions can be operationalized to enhance patient outcomes and experiences.

## Methods and Materials

### *Study Design*

This narrative review employs a descriptive analysis methodology to synthesize and evaluate existing literature on the role of Transition Theory in designing patient-centered interventions for cardiac care.

### *Literature Search Strategy*

The literature search was conducted to identify relevant studies published between 2014 and 2024. Multiple electronic databases were systematically explored, including PubMed, CINAHL, PsycINFO, Scopus, and Web of Science. Search terms were carefully selected to capture a comprehensive range of studies, combining keywords such as "Transition Theory," "cardiac care," "patient-centered interventions," "care transitions," "cardiovascular disease," and "nursing theory." Boolean operators (AND, OR) were used to refine the search, ensuring that all relevant combinations of terms were included. To enhance the robustness of the review,

additional articles were identified through backward citation tracking of key references.

### *Inclusion and Exclusion Criteria*

To ensure relevance and quality, strict inclusion and exclusion criteria were applied. Articles were included if they (1) discussed the application of Transition Theory in healthcare, (2) explored patient-centered approaches in cardiac care, or (3) evaluated interventions designed to improve transitions of care for cardiac patients. Studies had to be published in peer-reviewed journals, written in English, and available in full text. Articles focusing exclusively on pediatric populations or unrelated theoretical frameworks were excluded. Grey literature, conference abstracts, and opinion pieces were also omitted to maintain academic rigor.

### *Data Extraction and Synthesis*

Key data from the selected articles were extracted using a standardized form. Extracted information included study objectives, methodology, population characteristics, key findings, and implications for practice. For theoretical papers, specific elements of Transition Theory discussed or applied were noted. For empirical studies, details on the design, intervention characteristics, and outcomes were systematically documented. The extracted data were then analyzed thematically to identify recurring patterns, insights, and gaps. This thematic synthesis allowed for a coherent integration of theoretical and practical evidence, highlighting how Transition Theory can be operationalized in the context of cardiac care.

## Theoretical Foundations

Transition Theory provides a conceptual lens for understanding how individuals navigate the process of moving from one life phase or set of circumstances to another, particularly within complex health contexts. Its origins lie in the recognition that transitions are not merely single events but rather multifaceted, dynamic processes that unfold over time, with varying degrees of predictability and complexity. Early conceptualizations of transition underlined that individuals inevitably experience upheaval when confronted with change, whether that change is developmental, situational, or health-related. Over time, proponents of Transition

Theory refined these ideas by identifying universal properties such as awareness, engagement, and the degree of change. These properties interact with personal, familial, and societal factors, ultimately influencing the success of an individual's transition. As a result, the theory highlights that each transition involves ongoing role negotiation, adaptation, and a learning process marked by fluctuations in emotional, cognitive, and behavioral responses. This theoretical orientation underscores the importance of supportive structures, timely interventions, and recognition of individual context by framing transition as a continuum rather than a singular event. The core tenet that transitions are inherently relational also means that health outcomes hinge on the interaction between a person's internal coping capacities and the external resources available, suggesting that interventions must be both personalized and contextually sensitive (Dai et al., 2022).

One of the key contributions of Transition Theory is the articulation of different types and patterns of transitions. Types often include developmental transitions, such as moving from adolescence to adulthood; situational transitions, like changing jobs or relocating; and health-illness transitions, which encompass the onset or progression of a chronic condition. Patterns of transition describe whether a change is single, multiple, sequential, or simultaneous, acknowledging that individuals frequently undergo overlapping or successive transitions that compound their complexity. In health contexts, the properties of transition—awareness, engagement, and change—take on heightened significance. Awareness involves recognizing that a transition is occurring, which can vary widely based on patient education, symptom onset, and the clarity of communication from healthcare professionals. Engagement reflects the extent to which individuals participate in their own care and planning, illustrating the critical importance of patient-centered approaches that encourage active involvement. Change includes both external shifts, such as the move from hospital to home, and internal shifts in identity, self-concept, or perspective on illness. These elements are shaped by personal conditions, community dynamics, and societal structures, which all interplay to either facilitate or hinder the progress toward a stable, new normal. Transition Theory encourages systematic planning and targeted support at each phase, rather than

confining attention to a single intervention point by foregrounding these constructs (Hamedani et al., 2019).

Beyond identifying types and patterns, Transition Theory also emphasizes the potential for vulnerability during periods of change. In many cases, transitional periods pose heightened risks for medical complications, psychological stress, and social isolation. In the realm of chronic illness, patients often grapple with new treatment regimens, medication side effects, lifestyle modifications, and shifts in daily routines. Without structured guidance or adequate emotional support, they may find themselves in a state of uncertainty, lowering their capacity to adapt effectively. This vulnerability underscores the importance of timing and continuity in intervention design. If supportive resources are provided too late or are discontinued prematurely, individuals can experience setbacks that undermine their progress. The concept of transition as process also underscores that an individual's experience is not static; it evolves in stages, typically starting with an initial event or change trigger, moving into a critical period of adjustment, and culminating in some form of resolution or adaptation. Recognizing and responding to these stages through targeted clinical and psychosocial strategies can significantly enhance overall outcomes (D'Eath et al., 2018).

When applied to healthcare, Transition Theory functions as an interpretive and practical framework that assists providers in understanding patient experiences and needs during pivotal care transitions. In many clinical settings, transitions—such as shifts from hospital to home or from one level of care to another—are prone to miscommunication, fragmented services, and inadequate follow-up. Healthcare teams can systematically identify the specific challenges that arise during each phase by embedding the principles of Transition Theory into care protocols (Ngo-Hamilton, 2024; Pagliari, 2024; Pieper, 2024). This might include refining educational materials to increase patients' awareness, developing shared decision-making processes to boost engagement, or ensuring consistent access to multidisciplinary teams to address the breadth of change an individual is experiencing. The theory highlights that each transition has emotional, cognitive, and behavioral dimensions, suggesting that interventions need to be multidimensional as well, encompassing educational, psychological, and social

components. In the context of complex healthcare systems, this theoretical model advocates for fluid communication channels, strong coordination mechanisms, and ongoing evaluation of how patients are coping with their new realities. Transitional care programs that integrate these elements have been shown to reduce readmission rates, improve adherence to treatment regimens, and enhance patient satisfaction with care (Medina-Quero et al., 2017).

Within other healthcare domains, Transition Theory has been utilized to understand patient movement through different stages of cancer care, end-of-life care, and post-operative recovery. For instance, research on cancer survivorship often frames the shift from active treatment to survivorship as a transition requiring extensive psychosocial support and reorientation to a new sense of normalcy. End-of-life care can also be conceptualized through the lens of Transition Theory by focusing on how patients and families adapt to palliative regimens and cope with imminent changes in health status. This approach has guided interventions that address emotional well-being, advance care planning, and family dynamics. The unifying theme in these diverse applications is the recognition that transitions are shared experiences between patients, families, and healthcare providers. Each party brings its own perspectives and resources, and the transition's success depends on how well these perspectives align and integrate. Transition Theory fosters an integrative view of healthcare by considering these multiple layers of involvement, one that values relational processes and collaborative decision-making (Birke et al., 2022).

In cardiac care specifically, Transition Theory becomes especially relevant given the high stakes and complexity of cardiovascular conditions. Patients often experience acute events, such as myocardial infarctions or cardiac surgeries, which then initiate a series of post-acute transitions involving rehabilitation, medication management, and lifestyle modifications. This journey may be further complicated by comorbid conditions and psychosocial factors that place added demands on individuals and their support networks. The transition from hospital to outpatient cardiac rehabilitation, for example, is a critical juncture that can determine the long-term success of secondary prevention efforts (Ngo-Hamilton, 2024; Taylor et al., 2023). Without careful coordination, patients may fail to enroll in or complete

rehabilitation programs, undermining opportunities for functional and psychological recovery (Bradley et al., 2017). Similarly, the shift from formal rehabilitation settings to independent home-based maintenance is another key transition, where patients need to sustain exercise regimens, medication adherence, and dietary changes in the absence of constant clinical oversight (Ávila et al., 2019). This period may involve uncertainties about safe activity levels, symptom monitoring, and when to seek additional medical input, thereby highlighting the necessity for structured guidance and consistent follow-up.

By applying Transition Theory in these contexts, providers can better tailor education, support, and resources to individuals' evolving needs. For instance, patients who are in the awareness stage may benefit from clear explanations of their condition, treatment goals, and early warning signs of complications. As they progress into deeper engagement with rehabilitation, interventions might shift to focus on motivational strategies, problem-solving skills, and strengthening social support networks. This recognition that transition involves multiple dimensions—emotional, cognitive, physical—aligns with the established best practices in cardiac rehabilitation, which emphasize multidisciplinary care, goal setting, and patient empowerment. Telehealth interventions, such as remote monitoring and virtual coaching, can also be understood through the transition lens, as they offer continuous engagement and feedback that extend beyond the confines of a clinical setting (Xiao et al., 2021). These technologies have demonstrated efficacy in helping individuals integrate rehabilitation activities into daily life and sustain healthy behaviors over the long term (Ngo-Hamilton, 2024; Taylor et al., 2023). Equally, psychosocial support grounded in Transition Theory can address emotional turmoil and anxiety that often arise during the shift from constant medical supervision to greater patient autonomy (Dinesen et al., 2019; Dinesen & Spindler, 2018).

Applying Transition Theory to cardiac care highlights the interplay between personal conditions, such as a patient's resilience, psychological preparedness, and socioeconomic status, and system conditions, such as the availability of structured post-discharge programs or access to specialized rehabilitation services. The theory prompts healthcare practitioners to identify potential



barriers that may derail a smooth transition, whether those barriers are transportation challenges, financial constraints, or limited health literacy. Moreover, the dynamic nature of transition means that a patient's needs and risk factors can change over time, requiring flexible and adaptive care plans. For instance, as patients gain confidence in self-management, they may require less direct supervision but could benefit from peer support groups or community-based exercise programs to maintain momentum. Conversely, those who encounter recurring setbacks, such as arrhythmias or complications, may need a return to more intensive interventions until stability is regained (Thorup et al., 2016).

The theory's focus on role supplementation is another point of particular relevance for cardiac patients, many of whom must adapt to substantial lifestyle changes and shifts in personal identity. Individuals may go from seeing themselves as healthy and active to feeling constrained by physical limitations or dependent on devices and medications. Healthcare teams can incorporate strategies that bolster self-esteem and a sense of control by acknowledging that identity renegotiation is an integral part of the transition. Examples include empowerment-based education, structured coping skills training, and the involvement of family members or caregivers who can provide both emotional support and practical assistance. In this sense, Transition Theory aligns well with emerging practices in patient-centered cardiac care, which prioritize individualized goal-setting, psychosocial well-being, and the cultivation of self-management skills (Itoh et al., 2021). Research in cardiac rehabilitation has increasingly underscored the role of social determinants of health, suggesting that personalized interventions informed by theoretical constructs of transition might mitigate disparities in patient outcomes (Kitagawa et al., 2020).

Ongoing efforts to implement Transition Theory in cardiac care can also benefit from insights gained in other domains. Lessons learned in geriatric care, for example, underscore the importance of interprofessional communication and shared decision-making to address the full spectrum of patient needs. Similarly, palliative care literature highlights how family systems and spiritual dimensions may come into play during late-stage cardiovascular disease. Cardiac care teams can better anticipate the emotional, psychological, and

spiritual dimensions of long-term disease management by weaving these perspectives into a unified transitional framework. This multifaceted approach is particularly relevant given the aging population of cardiac patients, many of whom experience multiple chronic conditions requiring coordinated care strategies across diverse clinical settings (Nso et al., 2022). Transition Theory provides a roadmap for recognizing these complexities while promoting flexible yet structured interventions that can adapt to the evolving realities of patients and their support systems.

Overall, Transition Theory offers a powerful conceptual foundation for understanding and improving the trajectory of cardiac patients who move from acute interventions to long-term self-management. Its emphasis on process, multidimensionality, and contextual responsiveness dovetails with the patient-centered ethos increasingly championed in cardiology. Healthcare professionals can more accurately anticipate challenges and opportunities for timely intervention, thus enhancing patient outcomes through systematically identifying the types, properties, and patterns of transitions. As research continues to validate the benefits of telehealth, home-based rehabilitation, and individualized psychosocial support, the frameworks provided by Transition Theory can guide the design of more targeted and effective programs. This alignment between theoretical insight and practical application holds the promise of better continuity of care, fewer readmissions, and improved quality of life. The key lies in recognizing that transitions in cardiac care do not end with hospital discharge or the completion of a rehabilitation program but continue throughout the patient's journey of adaptation and reintegration into daily life. Clinicians and researchers can facilitate a more integrative, person-centered approach to cardiovascular care by embracing a transitional perspective—one that acknowledges the nuance of each stage of recovery and the unique interplay between individual, familial, and healthcare system factors (Boyce & Goossens, 2017).

### Application of Transition Theory in Cardiac Care

Application of Transition Theory in cardiac care involves examining the multitude of shifts that patients experience as they progress through different stages of treatment and recovery. These shifts can be

conceptualized as key transition points that exert a profound impact on clinical outcomes, psychosocial well-being, and overall quality of life. Transition Theory emphasizes that each transition is shaped by personal, environmental, and systemic factors, all of which determine whether a patient moves smoothly toward a new state of stability or encounters significant disruption. In cardiac care, identifying, understanding, and proactively managing these transitions can yield measurable benefits such as reduced readmissions, improved functional capacity, and enhanced patient satisfaction. Clinicians and researchers can gain a clearer framework for designing interventions that address the needs of patients at each juncture of their recovery by attending to the interplay of physical, emotional, and social dimensions.

Identifying Key Transition Points in Cardiac Care often begins with the hospital-to-home trajectory, a critical moment that places considerable responsibility on patients and families to continue complex care regimens without constant clinical oversight. Many patients, particularly those recovering from events such as myocardial infarction or bypass surgery, express a sense of uncertainty when leaving the hospital environment. This uncertainty may revolve around medication adjustments, symptom monitoring, and the reestablishment of daily routines that accommodate new restrictions or requirements. Transition Theory highlights that this phase often tests a patient's ability to translate hospital-based education into real-world self-management practices. Complications such as missing follow-up appointments, misunderstanding medication regimens, or neglecting physical activity guidelines can arise if educational materials and discharge instructions are not effectively tailored to the patient's cognitive and cultural contexts (Ávila et al., 2019). Another common transition scenario in cardiac care involves the shift from acute intervention to chronic disease management, wherein patients contend with the long-term realities of cardiovascular disease. This stage typically demands ongoing lifestyle modifications, which may include dietary changes, structured exercise, and adherence to pharmacological therapies. Individuals in this phase must adapt their identity to incorporate new health behaviors while coping with the psychosocial stressors that accompany chronic illness (Nso et al., 2022). Patients who navigate this transition successfully often benefit

from ongoing support in the form of cardiac rehabilitation programs, telehealth applications, and community-based resources (Dinesen et al., 2019; Dinesen & Spindler, 2018). Lastly, integration of palliative care represents another key transition point, especially for those whose cardiac conditions progress to end-stage heart failure or who experience repeated exacerbations. This juncture involves reconsidering goals of care, balancing aggressive treatments with comfort measures, and acknowledging the potential need for hospice services. Transition Theory draws attention to the emotional and existential dimensions of this shift, underlining how patients and families may wrestle with questions of quality versus quantity of life (Dierickx et al., 2015). Ensuring a smooth transition to palliative support can help preserve dignity, minimize unnecessary hospitalizations, and sustain a patient-centered approach even as curative options diminish.

Patient-Centered Perspectives on Transitions highlight the challenges that arise not only from medical regimens but also from a host of psychosocial and contextual factors. As individuals move from one setting or stage of care to another, they often confront psychological stress, altered self-image, and concerns about the future. These issues may intersect with socioeconomic conditions, health literacy, and access to supportive networks, forming a complex tapestry that influences the trajectory of recovery (Xiao et al., 2021). When a patient lacks social support—whether in the form of family caregivers, community groups, or peer networks—they may experience an elevated sense of isolation and be more prone to nonadherence. Transition Theory underscores that a person's readiness to engage in new behaviors or roles is closely tied to both the internal capacity for adaptation and the external reinforcement provided by their environment. In the case of cardiac rehabilitation, studies have shown that patients who receive consistent encouragement from healthcare providers, family, and peers are more likely to adhere to exercise prescriptions, dietary recommendations, and follow-up appointments (Carolina Santiago de Araújo et al., 2019). However, it is not sufficient to simply educate patients on lifestyle changes if underlying psychosocial barriers remain unaddressed. A patient with limited health literacy, for instance, may struggle to interpret medication labels or understand warning signs that require urgent medical

attention (Hamedani et al., 2019). Similarly, cultural norms and beliefs about illness can shape individuals' willingness to disclose symptoms or seek help, potentially complicating the transition to self-management. Mental health concerns, including depression and anxiety, have also been recognized as significant challenges during the post-discharge phase, as patients often grapple with fear of recurrence or diminished functional ability (D'Eath et al., 2018). Transition Theory suggests that these emotional responses can fluctuate over time and must be continually assessed, prompting a need for psychological screening and interventions integrated into cardiac rehabilitation and follow-up visits. Furthermore, caregivers themselves navigate distinct transition processes, as they adapt to new roles of monitoring medications, coordinating medical appointments, and providing emotional support. This dual dynamic of patient and caregiver transitions can create tension if expectations and capacities are not openly discussed or harmonized. Thus, a patient-centered perspective not only addresses the individual's needs but also extends to the interpersonal context in which care is delivered, recognizing that successful transitions depend on alignment between patient goals, caregiver resources, and clinical expertise (Boyce & Goossens, 2017).

Designing Interventions Using Transition Theory starts with mapping out the distinct phases of each transition and identifying the factors that facilitate or impede progress. This process involves a thorough assessment of patient attributes—such as coping style, previous healthcare experiences, and social capital—alongside system-level aspects like continuity of care, clarity of communication, and resource availability. Interventions guided by Transition Theory often adopt a phased approach, offering different types of support at strategic intervals. For example, pre-discharge initiatives might include comprehensive, personalized education about medication management, dietary modifications, and warning signs, coupled with a structured follow-up plan (Bradley et al., 2017). In the immediate post-discharge period, telemonitoring and home visits can be employed to ensure that patients and families feel confident in navigating routine tasks and identifying emerging complications (Ding et al., 2021). As patients transition from structured rehabilitation programs to self-directed maintenance, interventions might

emphasize problem-solving skills, community engagement, and peer support networks, thereby sustaining motivation over the long term (Ávila et al., 2019). This combination of early interventions and long-term follow-up recognizes that transitions are neither instantaneous nor uniform; each patient's journey may differ in duration, intensity of challenges, and potential setbacks.

Frameworks informed by Transition Theory also increasingly incorporate digital health solutions to maintain continuity and provide timely feedback. Remote monitoring tools and telehealth consultations can offer near real-time data on physiological parameters such as heart rate, blood pressure, and activity levels, alerting healthcare teams to potential issues before they escalate (Frederix et al., 2014). These digital platforms can also deliver educational modules tailored to the individual's stage of transition, reinforcing key behaviors such as medication adherence or adherence to exercise prescriptions (Dinesen et al., 2019; Dinesen & Spindler, 2018). This approach resonates with the emphasis Transition Theory places on ongoing engagement, as technology can keep patients connected to care teams even when they are geographically distant from clinical facilities. The level of personalization possible with these platforms aligns with the notion that transitions are inherently individual processes, shaped by unique circumstances that demand equally nuanced responses. Another promising avenue involves group-based or peer-led programs that draw from Transition Theory to create sense of community and shared learning. Patients often find reassurance in knowing that others have navigated similar experiences, encouraging open dialogue about barriers and practical solutions. Clinicians can create structured discussions on topics such as coping strategies, fear management, and realistic goal setting, all of which are critical to successful transitions by framing these peer interactions within a theory-based curriculum (Nso et al., 2022).

Several case studies exemplify how interventions grounded in Transition Theory can lead to measurable improvements in cardiac outcomes. One example involves a home-based rehabilitation program that tailored exercise prescriptions, telemonitoring, and psychosocial support to the individual transition phases of patients recovering from myocardial infarction (Ávila et al., 2019). Participants were provided with step-by-



step guidance on gradually increasing their physical activity, recognizing the early signs of complications, and engaging their families in meal planning. As their comfort and competence grew, they shifted to a more autonomous mode of rehabilitation, supported by periodic virtual check-ins to monitor progress and address any emerging concerns. Evaluations of this program showed reduced readmissions, enhanced self-efficacy, and improved adherence to prescribed regimens, suggesting that aligning interventions with transitional milestones can yield stronger patient outcomes than one-size-fits-all models (Ávila et al., 2019). Another initiative focused on patients transitioning from acute hospital settings to specialized outpatient clinics for arrhythmia management. The clinical team developed individualized counseling sessions by using Transition Theory as a guiding framework, ensuring that each patient's unique risk factors, health literacy level, and social support were acknowledged (Kato et al., 2019). The intervention included structured follow-up calls and appointments timed to coincide with common periods of vulnerability, such as when activity levels were increased or when medication adjustments were made. Follow-up data indicated that participants reported lower anxiety, improved adherence, and fewer emergency department visits compared to those receiving standard care (Kato et al., 2019). Such examples demonstrate that applying theoretical constructs around awareness, engagement, and role transitions can translate into practical strategies that address root causes of nonadherence and psychosocial distress.

Despite these positive developments, challenges remain in fully integrating Transition Theory into routine cardiac care. Resource constraints, staffing limitations, and variability in health literacy across patient populations can hinder the consistent application of theory-driven interventions (Xiao et al., 2021). Furthermore, healthcare systems typically rely on discrete service episodes rather than continuous, process-oriented support, which can create gaps during critical transitions. Overcoming these barriers requires a commitment from healthcare leadership to prioritize transitional care, invest in interprofessional education, and develop policies that reward effective coordination. The success of such efforts may also depend on how well healthcare teams collaborate with community

organizations and policy stakeholders, facilitating broad-based interventions that extend beyond the walls of the hospital. Nevertheless, the value of Transition Theory as a conceptual guide is increasingly recognized, particularly as the shift toward value-based care places a premium on outcomes that hinge on successful patient transitions, including reduced readmissions and enhanced quality of life (Salzwedel & Völler, 2021). Implementing Transition Theory at scale will require a continuous cycle of evaluation and refinement, capitalizing on emerging technologies, patient feedback, and interdisciplinary research to refine tools and strategies for supporting cardiac patients. Clinicians and researchers can ensure that new interventions address the complexity and evolution of patient journeys rather than offering fragmented or episodic care by grounding these initiatives in a clear theoretical foundation.

Emphasizing Transition Theory in cardiac care thus adds depth and structure to intervention design. Healthcare professionals, by identifying key transition points, appreciating patient-centered perspectives, and devising frameworks that respond to the dynamic nature of recovery, can better anticipate and mitigate the risks that often arise during times of change. These approaches align well with ongoing trends in telehealth, patient empowerment, and multidisciplinary collaboration, illustrating that theory-driven strategies can be seamlessly integrated into modern healthcare models. Although obstacles remain, particularly in resource-limited settings, the evidence suggests that systematically addressing transitions holds considerable promise for improving both clinical and patient-reported outcomes. Ongoing research and practice refinements will continue to reveal how best to operationalize Transition Theory in diverse cardiac populations, paving the way for more integrative and tailored care pathways. The cardiac care field can foster greater resilience among patients, reduce the incidence of relapse or complications, and ultimately enhance the experience of living with or recovering from cardiovascular disease by maintaining a steadfast focus on the fluid process of transition.

### Strengths and Challenges of Using Transition Theory

Transition Theory offers a multidimensional framework that helps to explain how patients navigate

major changes in health status, such as those associated with cardiac events and rehabilitation. One of its primary strengths is its comprehensive capacity to capture the evolving nature of patient experiences, encompassing physical, psychological, and social dimensions in a unified lens. This comprehensive view aligns well with contemporary models of patient-centered care, which acknowledge that each phase of recovery or disease management is influenced by a complex interplay of personal attributes, clinical demands, and broader social conditions. Transition Theory allows, through situating patients' experiences within a broader context, healthcare teams to design interventions that address immediate clinical tasks as well as the longer-term processes of adaptation and identity reconstruction. In settings such as cardiac rehabilitation, patients often face multiple transitions, including the shift from hospital to home and from structured rehabilitation programs to independent management. Transition Theory underscores that each of these junctures is influenced by prior health experiences, the availability of support networks, and shifting emotional states, reinforcing the importance of ongoing, adaptive interventions that evolve alongside patient needs (Thorup et al., 2016).

A notable strength of Transition Theory is how it encourages an integrative approach to patient care, recognizing that physical recovery cannot be viewed in isolation from psychosocial and environmental factors. For cardiac patients, structured exercise programs and medication management are critical, but so is ensuring that individuals understand the significance of these interventions and feel empowered to integrate them into daily routines. Research indicates that when patients view themselves as active participants who can shape their own health outcomes, adherence and satisfaction often increase significantly (Ávila et al., 2019). This integrative perspective extends to family caregivers, who themselves undergo transitional processes that can affect their capacity to offer effective support. The emotional and logistical challenges faced by caregivers may influence the patient's overall journey, making it critical for interventions to address the caregiver's role, too. Transition Theory's emphasis on the contextual factors shaping each individual's journey creates a framework in which families, communities, and healthcare systems are seen as integral actors. This recognition of multiple influences prompts more

collaborative and dynamic care planning, potentially bridging gaps that often arise when services are segmented or narrowly focused on specific clinical outcomes (Nso et al., 2022).

Another strength lies in the theory's capacity to integrate with evidence-based cardiac care practices, such as multidisciplinary rehabilitation and telehealth-based support. Studies exploring telemonitoring interventions have shown that remote access to health metrics and professional feedback can significantly reduce readmissions and improve adherence, particularly during periods of heightened vulnerability post-discharge (Medina-Quero et al., 2017). Transition Theory complements these findings by illuminating why certain patients are more likely to engage with telehealth services, focusing attention on factors such as awareness, motivation, and readiness to adapt. This underscores how technology and human behavioral processes can be synchronized to foster more seamless transitions. Providers can tailor telehealth platforms by applying theoretical constructs like awareness and role negotiation to optimize patient engagement, ensuring that technological tools address actual concerns and align with patients' psychosocial contexts. The same logic applies to in-person cardiac rehabilitation programs, where structured exercise sessions and educational lectures must be carefully timed and personalized. Rather than view rehabilitation as a monolithic intervention, Transition Theory encourages dynamic adjustments, suggesting that programs focus on shifting from externally guided protocols to more autonomous, patient-directed activities as individuals gain confidence and experience. This notion of gradual empowerment aligns with the idea that transitions are not abrupt events but evolving processes that span physical, mental, and social milestones (Ding et al., 2021).

Because Transition Theory conceptualizes multiple overlapping transitions, it is especially well-suited to address the complex trajectories of chronic illness, where patients may move between stable periods, acute exacerbations, and potentially palliative phases. In cardiovascular disease, it is increasingly acknowledged that timely transitions to palliative or hospice care can reduce unnecessary hospital admissions and support quality of life, yet many patients are not introduced to these options early enough (Dierickx et al., 2015). Transition Theory highlights that the shift toward

palliative goals can be emotionally charged and tied to patients' evolving sense of identity, pointing to the need for sensitive discussions and gradual acclimatization to the idea of comfort-focused treatment. Providers can employ strategies that frame palliative care as another form of proactive support by recognizing that patients may resist palliative measures if they perceive such interventions as giving up. This underscores how the theory's comprehensive approach can illuminate barriers that might otherwise be overlooked, thereby guiding more empathetic and transparent communication. Through consistent application, healthcare teams can track the emotional, cognitive, and social dimensions that shape patient acceptance of palliative approaches, potentially leading to better management of symptoms and enhanced patient satisfaction (Salzwedel & Völler, 2021).

However, implementing Transition Theory in real-world settings also presents challenges, including barriers to integrating a theoretical perspective into practical interventions. One major issue lies in the mismatch between the complexity outlined by the theory and the structures within which most cardiac care is delivered. Healthcare systems are often organized around discrete services, such as diagnostic procedures, acute hospital care, and outpatient follow-up, each operating under time and budget constraints that may not accommodate extended transitional support (Bradley et al., 2017). Clinicians who understand the nuanced nature of transitions may still find it difficult to secure the necessary resources to implement the type of continuous, adaptive care that Transition Theory envisions. Workflows and reimbursement models frequently reward volume-based care rather than process-oriented approaches, limiting opportunities to develop longitudinal, theory-driven interventions that follow patients across multiple stages of recovery. This points to a structural issue: while Transition Theory calls for coordinated, individualized strategies, many healthcare institutions lack the interprofessional collaboration and administrative support to enact them consistently (Xiao et al., 2021).

Another challenge stems from the additional training and mindset shift required for providers to fully adopt Transition Theory in practice. Familiarity with the theory itself may be limited, and translating its concepts into actionable steps can be time-consuming for busy

clinical teams. Although some cardiac programs integrate best practices from nursing, psychology, and physical therapy into their rehabilitation models, the deeper focus on transitional processes demanded by the theory requires a cultural shift within the organization. Providers must learn to view patients not solely in terms of their clinical milestones—such as wound healing or ejection fraction improvements—but also through the lens of psychological readiness, social constraints, and role negotiation within families. This perspective calls for regularly scheduled interdisciplinary meetings, more elaborate patient assessments, and individualized goal-setting sessions. While research has shown that such efforts can reduce complications and enhance patient satisfaction, the upfront investment in staffing and professional development can deter organizations that are already operating under fiscal stress (Birke et al., 2022).

A further limitation pertains to how well Transition Theory addresses broader system-level or structural issues, especially social determinants of health. While the theory does draw attention to environmental and relational factors, its primary emphasis is on the personal processes of transition, such as shifting identities and coping mechanisms. In communities where economic hardship, fragmented healthcare systems, and limited access to high-quality services are prevalent, the ability of patients to experience positive transitions may be constrained by conditions beyond the immediate scope of their healthcare encounters. Housing instability, food insecurity, and lack of reliable transportation can severely disrupt the continuity of cardiac care and rehabilitation, creating barriers to adherence and follow-up that even the most thoughtfully designed transitions-focused interventions struggle to overcome (Kitagawa et al., 2020). Transition Theory, in its core framework, does not fully operationalize how to intervene at the policy or public health level to address these systemic factors, although it does remind practitioners to consider them. In practice, this gap means that while providers may be adept at tailoring transitions support to individual needs, they may still contend with structural inequities that hamper their efforts, such as insurance constraints limiting post-discharge follow-up or inadequate social services in resource-poor regions (Carolina Santiago de Araújo et al., 2019).

Moreover, measuring outcomes of transitions is complicated, which poses another challenge when attempting to demonstrate the added value of Transition Theory for large-scale implementation. Traditional metrics in cardiac care, such as readmission rates, medication adherence, and functional capacity, do not always capture the incremental or qualitative shifts that define a successful transition. Transition Theory emphasizes changes in patients' self-concept, coping skills, and social role adaptation, aspects that may be better gauged by patient-reported outcomes or qualitative measures. However, these more nuanced metrics can be time-intensive to collect and analyze, making them less appealing to institutions that rely on standardized, easily quantifiable indicators of performance (Nso et al., 2022). Future efforts to integrate Transition Theory effectively might need to develop standardized yet flexible evaluation frameworks that can track the progression of patient experiences over time, perhaps leveraging technology to gather patient feedback at multiple intervals post-discharge. Such initiatives would likely improve the evidence base demonstrating how transitions-focused interventions impact overall well-being, but they require an infrastructure not yet in place in many healthcare settings (Schmidt, 2024).

The nature of personalized, contextually grounded interventions also means that Transition Theory-based strategies can be challenging to replicate across diverse patient populations. While the theory highlights the importance of sociocultural factors, it does not prescribe specific solutions for issues such as language barriers, cultural health beliefs, or varying household dynamics. For example, the success of a transitions-focused telehealth program in an urban community with strong broadband access may not translate seamlessly to a rural environment with limited connectivity. Similarly, an approach that works for a population with high levels of formal education may need significant adaptation for patients with limited health literacy. This variability can make it difficult to generalize findings or create uniform protocols, complicating broader implementation and potentially discouraging organizations from adopting an approach that seems to require constant customization (Frederix et al., 2014). Yet, within this limitation lies an opportunity: Transition Theory, by its very nature, supports individualized interventions, suggesting that a

degree of localized adaptation is essential. The challenge is balancing that adaptability with the need for scalability and standardization, especially in large health systems seeking streamlined solutions to quality improvement mandates (Puri, 2023).

Despite these challenges, the ongoing shift toward value-based care and patient-centered models creates an environment in which Transition Theory holds considerable appeal. Healthcare policies increasingly emphasize reducing preventable readmissions, enhancing self-management, and improving patient satisfaction—outcomes closely linked to the quality of transitions. As organizations expand their focus on social determinants and explore innovative care models, the multifaceted perspective offered by Transition Theory can serve as a roadmap for designing interventions that better match the lived experiences of cardiac patients (Bellmann et al., 2020). Overcoming the barriers to implementation may involve advocacy for integrated care pathways that span across settings, robust training programs for healthcare professionals, and policy changes that incentivize transitional support. Increasingly, pilot projects and studies illustrate that even partial incorporation of theory-based practices—such as structured discharge planning, targeted psychosocial support, or phased rehabilitative guidance—can lead to gains in outcomes and cost savings (Xiao et al., 2021). These incremental successes may build momentum for more comprehensive applications in the future, spurring collaborative efforts among clinicians, researchers, and policymakers.

In sum, Transition Theory's strength in offering a comprehensive and integrative lens on patient experiences in cardiac care is counterbalanced by practical and structural challenges that can obstruct its full-scale application. The theory excels in underscoring the evolving nature of transitions, spotlighting the blend of clinical, psychosocial, and environmental factors at each stage. It aligns seamlessly with the philosophy of patient-centered care, advocating for contextualized interventions that adapt over time. Yet, the intricacies of healthcare financing, limitations in interprofessional coordination, and the inherent difficulties of quantifying transitional processes can hinder the routine use of this model. Additionally, external conditions such as inequitable access to healthcare services create discrepancies between the theory's ideals and real-

world capacity to facilitate smooth transitions. Balancing these strengths and limitations highlights the need for continued research, innovative policy reforms, and organizational commitment to bring Transition Theory from conceptual promise to actionable standard practice. The potential for Transition Theory to significantly enhance the continuum of cardiac care remains substantial by refining strategies for measuring transitional outcomes, training healthcare professionals to apply theoretical constructs in day-to-day care, and addressing broader social determinants.

### Implications for Practice and Future Research

Healthcare providers in cardiac care are continually seeking more effective ways to coordinate services, reduce readmissions, and facilitate long-term adherence among patients with complex cardiovascular conditions. Transition Theory offers a structured yet flexible framework that can help practitioners navigate these objectives by emphasizing the dynamic, contextual nature of each patient's journey. One of the key implications for practice is the potential for Transition Theory to be integrated into care coordination protocols, enabling providers to identify and address pivotal transition points that carry heightened risk and vulnerability. For instance, the transition from hospital to home, which remains a critical juncture, can be systematically managed by mapping out a patient's anticipated challenges—such as medication complexity or fear of physical exertion—and addressing these through individualized patient education, home-based telemonitoring, or community support linkages (Ávila et al., 2019). In this view, the theory's emphasis on awareness and engagement helps practitioners identify not only the clinical tasks that need to be completed but also the psychological and social hurdles that may disrupt the adoption of healthier behaviors. Rather than focusing merely on discharge checklists, care teams can employ transitional assessments that inquire about each patient's coping strategies, available family support, and comprehension of follow-up instructions, thus fostering a more integrative form of coordination (Bradley et al., 2017).

By applying Transition Theory to enhance care coordination, clinicians can also improve patient engagement and outcomes through a range of targeted

strategies. One prominent approach is to use theory-driven communication techniques that adapt to a patient's readiness for behavioral change and their emotional state regarding their condition. Rather than delivering static information, providers can incrementally adjust their messaging—offering more directive support in the initial stages of transition and gradually encouraging greater autonomy as the patient moves from dependence to self-management (Hamedani et al., 2019). This nuanced methodology can be particularly useful in cardiac rehabilitation programs, where patients may start with guided exercise sessions under close supervision and then transition to more independent routines that still include remote monitoring and intermittent clinical feedback (Thorup et al., 2016). Similarly, psychosocial support services such as counseling and peer support groups can be phased in according to the level of emotional distress or role confusion the patient is experiencing. This structured layering of support resonates with the theory's emphasis on transitional phases, ensuring that interventions address not only the "what" (specific clinical tasks) but also the "how" and "when" (optimal sequencing and interpersonal approach) of care delivery. Research suggests that these strategies can have a tangible impact on outcomes, leading to improved adherence to medication regimens, reduced anxiety and depression, and more consistent participation in rehabilitation activities (D'Eath et al., 2018).

The impetus to tailor interventions according to a patient's unique transition profile also underscores the value of interprofessional collaboration. Providers from different disciplines—such as nursing, physical therapy, social work, nutrition, and psychology—each hold crucial insights into distinct aspects of the transition process (Dinesen et al., 2019; Dinesen & Spindler, 2018). When these professionals collaborate within a Transition Theory framework, they can create multi-layered interventions that simultaneously address physical symptoms, lifestyle modifications, and emotional well-being, thereby improving the continuity and depth of patient care. For example, while a dietitian may focus on nutritional counseling to prevent recurrence of cardiac events, a social worker might assess transportation barriers and health insurance issues, reducing the likelihood that external constraints will derail the patient's efforts. In telehealth settings,



technology can amplify these collaborative efforts by offering a centralized platform for communication and data sharing, allowing team members to monitor patient progress collectively and intervene promptly when new challenges arise (Frederix et al., 2014). These combined approaches reflect Transition Theory's assertion that successful adaptation depends on the alignment of personal and environmental factors. Healthcare providers, by proactively identifying and resolving discordances—whether in the form of unclear discharge instructions, lapses in psychosocial support, or financial hardship—can facilitate a smoother, more sustainable transition.

Integrating Transition Theory into practice also has the potential to reshape how success is measured in cardiac care. Traditional metrics like hospital readmissions, mortality rates, and exercise tolerance provide valuable snapshots of patient progress but may not capture nuanced changes in self-efficacy, coping, or role integration. Transition Theory encourages the use of patient-reported outcomes and qualitative assessments, such as diaries, focus groups, and structured interviews, to gauge how individuals perceive and manage their own transitions (Hamedani et al., 2019). These deeper data points can highlight areas of unmet need, especially in the psychosocial domain, and guide the adjustment of care plans to avoid preventable setbacks. Over time, adopting such evaluative frameworks can inform providers about the transition trajectories most commonly experienced by specific subgroups of cardiac patients, thus facilitating more precise targeting of interventions. In an era where personalized care is increasingly prioritized, this alignment between theoretical insight and practical measurement could foster innovative care models that adapt in real time to the patient's evolving condition and preferences (Xiao et al., 2021).

Recommendations for future research on Transition Theory in cardiac care stem from the recognized gaps in empirical validation of theory-driven interventions and the need for more interdisciplinary studies. Although observational and pilot studies have illustrated the potential benefits of applying Transition Theory in discharge planning, telemonitoring, and rehabilitation, there remains a need for more rigorous research designs—particularly randomized controlled trials (Kato et al., 2019). Such studies could systematically

compare theory-based programs with standard care to measure differences in clinical, psychosocial, and cost-effectiveness outcomes. Researchers would enhance the credibility of Transition Theory as a core guiding principle in cardiac care, potentially encouraging broader adoption by establishing robust evidence of efficacy. These trials should be designed to capture not only traditional endpoints like readmission rates or mortality but also patient-reported experiences, coping strategies, and role adaptation over time, thereby providing a more comprehensive account of how well transitional interventions align with the lived realities of individuals recovering from cardiac events (Carolina Santiago de Araújo et al., 2019).

Another fruitful area of investigation involves exploring how Transition Theory could be woven into interdisciplinary approaches that span care settings and even cross national boundaries. Existing literature often focuses on single-site experiences or specific stages of transition, such as hospital discharge or entry into rehabilitation programs (Schmidt, 2024). However, patients with cardiovascular disease frequently navigate multiple transitions across disparate healthcare systems, from acute hospital care to community-based services and sometimes to palliative or hospice care. Studies that track patient transitions longitudinally and across multiple institutions could yield deeper insights into the systems-level barriers that influence transitional success. These investigations might reveal, for instance, how policy variations, reimbursement models, or cultural attitudes about illness shape patient engagement and care quality. The results could then inform policy recommendations aimed at harmonizing care coordination across different healthcare environments. Further, given the global burden of cardiovascular disease, international collaborations could be especially valuable in highlighting how transitions unfold in diverse cultural contexts, identifying universal challenges and solutions that transcend geographic boundaries (Nso et al., 2022).

Additionally, more comprehensive explorations of digital health interventions through the lens of Transition Theory could prove transformative for future research. Telemedicine and remote monitoring have demonstrated potential to sustain patient engagement and mitigate the geographic or logistical barriers to in-person visits, yet questions remain about the best ways

to optimize these technologies for transitional support (Dinesen et al., 2019; Dinesen & Spindler, 2018). Rather than implementing telehealth solutions merely to replicate clinic-based care in a remote setting, Transition Theory suggests that these digital platforms should be tailored to key transitional milestones, offering just-in-time guidance, motivational prompts, and psychosocial check-ins (Pagliari, 2024; Pieper, 2024). Researchers could examine how the use of wearable devices, smartphone applications, and virtual counseling sessions aligns with the phases of transition—whether, for example, they significantly improve patient awareness of risk factors, prompt timely help-seeking behavior, or strengthen role negotiation with family members. Mixed-methods studies that combine quantitative outcome measures with qualitative user experience feedback would likely provide the richest data on the advantages and limitations of these digital approaches, identifying pathways for iterative improvement. As technology continues to evolve, research guided by Transition Theory could help developers and clinicians alike design systems that truly reflect the complexity of recovery from cardiac events (Nso et al., 2022).

Finally, research would benefit from more nuanced investigations into how socioeconomic determinants intersect with transitional processes in cardiac care. While Transition Theory acknowledges that environmental conditions play a role in shaping patient trajectories, there is a need for more detailed inquiries into how factors such as income, education, and neighborhood resources influence the capacity to enact lifestyle changes or adhere to prescribed regimens (Kitagawa et al., 2020). Addressing social determinants within a transitions framework might involve studying community health worker programs, which can offer culturally sensitive, peer-driven support and bridge gaps in care access. These initiatives could be evaluated to determine whether they promote more effective role transitions among patients with limited resources. Similarly, large-scale comparative studies could explore how transitional experiences differ in urban versus rural settings, potentially informing targeted policy changes or resource allocation strategies. Future research, by integrating these lines of inquiry, can better illuminate the several ways in which personal transitions interface with societal constraints, thereby offering actionable

insights for both clinicians and policymakers aiming to improve equity in cardiac outcomes (Carolina Santiago de Araújo et al., 2019).

In summary, the implications of applying Transition Theory to cardiac care practice are far-reaching, highlighting the potential for more nuanced care coordination, improved patient engagement, and better alignment between clinical milestones and psychosocial needs. At the same time, future research should focus on empirically validating these theoretical frameworks, examining interdisciplinary and longitudinal dimensions of transitional care, and deepening understanding of how social and technological contexts shape the success of different interventions. As the landscape of cardiac care continues to evolve, sustained inquiry into how Transition Theory can inform innovative models of care will offer valuable guidance for healthcare systems striving to optimize patient recovery, reduce avoidable hospitalizations, and ultimately enhance the experience of living with or recovering from cardiovascular conditions.

## Conclusion

The application of Transition Theory in cardiac care holds significant promise for improving patient outcomes and fostering a more integrative, patient-centered approach to rehabilitation and long-term disease management. This theoretical lens highlights how physical, emotional, and social factors converge during the often complex journey from acute interventions to sustained self-management. In doing so, it underscores that successful recovery extends well beyond clinical milestones, emphasizing the importance of tailored education, psychosocial support, and continuous engagement throughout every phase of care.

Grounded in a comprehensive view of the patient experience, Transition Theory offers a framework that can sharpen focus on the critical junctures most vulnerable to disruption, such as hospital discharge, initiation of rehabilitation, and eventual return to community living. The theory informs more adaptive, phased interventions. This approach encourages healthcare teams to adjust their strategies in tandem with each patient's evolving needs and capacities, leading to stronger adherence, fewer setbacks, and greater overall satisfaction. Moreover, recognizing the

personal, familial, and broader environmental influences that shape transitions helps direct attention to barriers such as limited health literacy, insufficient social support, or financial constraints, prompting the development of more equitable and context-sensitive programs.

The insights derived from Transition Theory also highlight avenues for further exploration, notably in how to best integrate theory-driven practices into large-scale health systems and how to address the social determinants that frequently impede successful transitions. Future studies that systematically evaluate the impact of theory-based interventions, measure relevant patient-reported outcomes, and draw on interdisciplinary collaborations are poised to refine and strengthen the evidence base. These efforts can pave the way for innovative models that seamlessly connect clinical settings, outpatient services, and home-based care, ultimately ensuring that cardiac patients receive sustained, meaningful support throughout their recovery. It advocates, cardiac care providers can enhance coordination, personalize treatment goals, and empower patients to navigate critical health transitions with greater confidence and resilience by embracing Transition Theory and the adaptive, individualized strategies.

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The authors of this article declared no conflict of interest.

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#### Transparency of Data

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#### References

- Amiri, M., Khosh Akhlagh, H., Sajadian, P. S., & Rezaie Jamalouei, H. (2023). The effectiveness of treatment based on acceptance and commitment on sexual performance and emotional safety in men with cardiovascular disease. *Applied Family Therapy Journal (AFTJ)*, 4(4), 520-535. <https://doi.org/10.61838/kman.aftj.4.4.29>
- Ávila, A., Claes, J., Buys, R., Azzawi, M., Vanhees, L., & Cornelissen, V. (2019). Home-Based Exercise With Telemonitoring Guidance in Patients With Coronary Artery Disease: Does It Improve Long-Term Physical Fitness? *European Journal of Preventive Cardiology*, 27(4), 367-377. <https://doi.org/10.1177/2047487319892201>
- Bellmann, B., Lin, T., Greissing, K., Rottner, L., Rillig, A., & Zimmerling, S. (2020). The Beneficial Effects of Cardiac Rehabilitation. *Cardiology and Therapy*, 9(1), 35-44. <https://doi.org/10.1007/s40119-020-00164-9>
- Birke, H., Foxvig, I., Burns, K., Toft, U., Hansen, A. B. G., Hauge, P. I., Foghmar, S., Mindegaard, R. B., & Jakobsen, L. M. (2022). Heart Rehabilitation for All (HeRTA): Protocol for a Feasibility Study and Pilot Randomized Trial. *PLoS One*, 17(6), e0270159. <https://doi.org/10.1371/journal.pone.0270159>
- Boyce, L. W., & Goossens, P. H. (2017). Rehabilitation After Cardiac Arrest: Integration of Neurologic and Cardiac Rehabilitation. *Seminars in Neurology*, 37(01), 094-102. <https://doi.org/10.1055/s-0036-1593860>
- Bradley, S. M., Maynard, C., & McCabe, J. M. (2017). Referral to Cardiac Rehabilitation After Percutaneous Coronary Intervention, Coronary Artery Bypass Surgery, and Valve Surgery. *Circulation Cardiovascular Quality and Outcomes*, 10(6). <https://doi.org/10.1161/circoutcomes.116.003364>
- Carolina Santiago de Araújo, P., Chaves, G., Davies, P., Taylor, R. S., & Grace, S. L. (2019). Interventions to Promote Patient Utilization of Cardiac Rehabilitation: Cochrane Systematic Review and Meta-Analysis. *Journal of clinical medicine*, 8(2), 189. <https://doi.org/10.3390/jcm8020189>
- D'Eath, M., Byrne, M., Murphy, P., Jaarsma, T., McSharry, J., Murphy, A. W., Doherty, S., Noone, C., & Casey, D. (2018). Participants' Experiences of a Sexual Counseling Intervention During Cardiac Rehabilitation. *The Journal of Cardiovascular Nursing*, 33(5), E35-E45. <https://doi.org/10.1097/jcn.0000000000000482>
- Dai, Z.-J., Zhang, J., Xu, S.-T., Zhang, J., Zhuang, C.-F., & Gu, P.-H. (2022). Application of Continuous Nursing Care Based on Hierarchical Diagnosis and Treatment Mode in Stage II Cardiac Rehabilitation of Patients After Percutaneous Coronary Intervention. *Frontiers in Cardiovascular Medicine*, 9. <https://doi.org/10.3389/fcvm.2022.922449>
- Dierickx, S., Deliëns, L., Cohen, J., & Chambaere, K. (2015). Comparison of the Expression and Granting of Requests for Euthanasia in Belgium in 2007 vs 2013. *JAMA internal medicine*, 175(10), 1703. <https://doi.org/10.1001/jamainternmed.2015.3982>
- Dinesen, B., Nielsen, G., Andreasen, J. J., & Spindler, H. (2019). Integration of Rehabilitation Activities Into Everyday Life Through Telerehabilitation: Qualitative Study of Cardiac

- Patients and Their Partners. *Journal of medical Internet research*, 21(4), e13281. <https://doi.org/10.2196/13281>
- Dinesen, B., & Spindler, H. (2018). The Use of Telerehabilitation Technologies for Cardiac Patients to Improve Rehabilitation Activities and Unify Organizations: Qualitative Study (Preprint). <https://doi.org/10.2196/preprints.10758>
- Ding, E. Y., Erskine, N., Stut, W., McManus, D. D., Peterson, A., Wang, Z., Valle, J. E., Albuquerque, D., Alonso, Á., Botkin, N. F., & Pack, Q. R. (2021). MI-PACE Home-Based Cardiac Telerehabilitation Program for Heart Attack Survivors: Usability Study. *JMIR human factors*, 8(3), e18130. <https://doi.org/10.2196/18130>
- Dunlay, S. M., Pack, Q. R., Thomas, R. J., Killian, J. M., & Roger, V. L. (2014). Participation in Cardiac Rehabilitation, Readmissions, and Death After Acute Myocardial Infarction. *The American Journal of Medicine*, 127(6), 538-546. <https://doi.org/10.1016/j.amjmed.2014.02.008>
- Frederix, I., Vanhees, L., Dendale, P., & Goetschalckx, K. (2014). A Review of Telerehabilitation for Cardiac Patients. *Journal of Telemedicine and Telecare*, 21(1), 45-53. <https://doi.org/10.1177/1357633x14562732>
- Hamedani, B., Shahsavari, H., Amaniyan, S., Sieloff, C. L., & Vaismoradi, M. (2019). Development and Psychometric Evaluation of the Cardiac Rehabilitation Adherence Tool (CRAT). *Journal of Cardiovascular Development and Disease*, 6(3), 25. <https://doi.org/10.3390/jcdd6030025>
- Itoh, H., Amiya, E., Narita, K., Shimbo, M., Taya, M., Komuro, I., Hasegawa, T., Makita, S., & Kimura, Y. (2021). Efficacy and Safety of Remote Cardiac Rehabilitation in the Recovery Phase of Cardiovascular Diseases: Protocol for a Multicenter, Nonrandomized, Single-Arm, Interventional Trial. *Jmir Research Protocols*, 10(10), e30725. <https://doi.org/10.2196/30725>
- Jeffares, I., Merriman, N. A., Rohde, D., McLoughlin, A., Scally, B., Doyle, F., Horgan, F., & Hickey, A. (2019). A Systematic Review and Meta-Analysis of the Effects of Cardiac Rehabilitation Interventions on Cognitive Impairment Following Stroke. *Disability and Rehabilitation*, 43(6), 773-788. <https://doi.org/10.1080/09638288.2019.1641850>
- Kato, M., Ogano, M., Mori, Y., Kochi, K., Morimoto, D., Kito, K., Green, F. N., Tsukamoto, T., Kubo, A., Takagi, H., & Tanabe, J. (2019). Exercise-Based Cardiac Rehabilitation for Patients With Catheter Ablation for Persistent Atrial Fibrillation: A Randomized Controlled Clinical Trial. *European Journal of Preventive Cardiology*, 26(18), 1931-1940. <https://doi.org/10.1177/2047487319859974>
- Khodadad Hatkeposhti, Z., Hasanzadeh, R., & Emadian, S. O. (2022). Comparison of the effectiveness of cognitive-behavioral therapy and emotional schema therapy on neuroticism and dysfunctional attitudes in cardiovascular patients. *Applied Family Therapy Journal (AFTJ)*, 3(3), 280-296. <https://doi.org/10.61838/kman.aftj.3.3.16>
- Kitagawa, T., Hidaka, T., Naka, M., Nakayama, S., Yuge, K., Isobe, M., & Kihara, Y. (2020). Current Medical and Social Issues for Hospitalized Heart Failure Patients in Japan and Factors for Improving Their Outcomes — Insights From the REAL-HF Registry —. *Circulation Reports*, 2(4), 226-234. <https://doi.org/10.1253/circrep.cr-20-0011>
- Medina-Quero, J., Olmo, M. R. F., Aguilera, M. D. P., & Espinilla, M. (2017). Real-Time Monitoring in Home-Based Cardiac Rehabilitation Using Wrist-Worn Heart Rate Devices. *Sensors*, 17(12), 2892. <https://doi.org/10.3390/s17122892>
- Ngo-Hamilton, A. (2024). Cardiac Rehabilitation for Heart Failure: Progress and Gaps in Evidence and Policy. *Current Opinion in Cardiology*, 39(3), 196-201. <https://doi.org/10.1097/hco.0000000000001129>
- Nso, N., Nassar, M., Mbome, Y., Emmanuel, K., Ngonge, A. L., Badejoko, S., Akbar, S., Landry, I., Alfishawy, M., Munira, M. S., & Rizzo, V. (2022). Comparative Assessment of the Long-Term Efficacy of Home-Based Versus Center-Based Cardiac Rehabilitation. *Cureus*. <https://doi.org/10.7759/cureus.23485>
- Pagliari, C. (2024). Different Models of Cardiac Telerehabilitation for People With Coronary Artery Disease: Features and Effectiveness: A Systematic Review and Meta-Analysis. *Journal of clinical medicine*, 13(12), 3396. <https://doi.org/10.3390/jcm13123396>
- Pieper, C. (2024). InterVFast—effectiveness and Acceptance of Intermittent Fasting in Cardiac Rehabilitation Patients: Study Protocol of a Randomized Controlled Trial. *Trials*, 25(1). <https://doi.org/10.1186/s13063-023-07843-7>
- Puri, S. N. (2023). A Comparison Between Cardiac Telerehabilitation Program and Outpatient Hospital-Based Cardiac Rehabilitation Program for Patients Undergoing Coronary Artery Bypass Graft (CABG) Surgery: A Review. *Cureus*. <https://doi.org/10.7759/cureus.48488>
- Salzwedel, A., & Völler, H. (2021). Cardiac Rehabilitation: Patient-Reported Outcomes Are Decisive for Success. *Deutsches Ärzteblatt International*. <https://doi.org/10.3238/arztebl.m2021.0211>
- Schmidt, A. M. (2024). A Novel Referral Strategy to Enhance the Enrollment of Patients With Heart Failure in Cardiac Rehabilitation: A Feasibility Study. *Health Science Reports*, 7(3). <https://doi.org/10.1002/hsr2.1961>
- Taylor, R. S., Dalal, H. M., & Zwisler, A.-D. (2023). Cardiac Rehabilitation for Heart Failure: ‘Cinderella’ or Evidence-Based Pillar of Care? *European Heart Journal*, 44(17), 1511-1518. <https://doi.org/10.1093/eurheartj/ehad118>
- Thorup, C. B., Hansen, J. H. L., Grønkjær, M., Andreasen, J. J., Nielsen, G., Sørensen, E. E., & Dinesen, B. (2016). Cardiac Patients’ Walking Activity Determined by a Step Counter in Cardiac Telerehabilitation: Data From the Intervention Arm of a Randomized Controlled Trial. *Journal of medical Internet research*, 18(4), e69. <https://doi.org/10.2196/jmir.5191>
- Xiao, M., Li, Y., & Guan, X. (2021). Community-Based Physical Rehabilitation After Percutaneous Coronary Intervention for Acute Myocardial Infarction. *Texas Heart Institute Journal*, 48(2). <https://doi.org/10.14503/thij-19-7103>