

Organizational innovation in healthcare and its impact on care quality: Systematic review and future research agenda

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Abstract

Organizational innovations are increasingly recognized as crucial in modern healthcare services, offering opportunities to positively influence all aspects of care quality - including structure, processes, and outcomes. This article explores organizational innovations reshaping the healthcare sector and assesses their effects on care quality. We meticulously examined relevant literature (n=82) indexed in Scopus databases up to July 2023 through a systematic literature review coupled with bibliometric analysis. Our investigation unveiled a spectrum of avenues for enhancing healthcare quality, ranging from leveraging digital health technologies for disease prevention and personalized care to optimizing patient journey management and facilitating better coordination of care and resource management by decision-makers. It is evident that impactful organizational innovations, drawing on diverse forms of innovation, exert a tangible influence on the healthcare sector, particularly in terms of enhancing care quality.

Keywords: organizational innovation, health, health care quality.

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1 Introduction

The healthcare sector is undergoing tremendous changes due to the need to stay updated with new medical information, technologies and build relationships with all stakeholders. In addition, the healthcare system is experiencing increased pressure due to changing population demographics, increased number of patients, and higher numbers of traumas and acuity (Gomes Chaves et al., 2021). Moreover, government pressure requiring healthcare facilities to reduce costs without compromising the quality and safety of care is increasing. The dramatic retirement rate of nurses and other healthcare professionals has created recruitment and retention crises in the healthcare sector. These issues have significantly driven the need for healthcare innovations aimed at improving the quality, accessibility, and affordability of care across the world (Esdar et al., 2021). As a result, researchers, scientists, healthcare practitioners, government agencies and regulatory bodies, engineers, tech experts, and investors collaborate to develop innovations necessary to implement radical structural changes in the healthcare system. These innovations range from

technologies, medical research, information advances, and cooperative networks to improve the quality and efficiency of healthcare services and laws and regulations.

Innovations in healthcare are categorized into multiple classes. For instance, product innovation is concerned with creating and developing new or improved products, devices, or technologies that address specific healthcare challenges, improve patient care, enhance medical processes, and contribute to the overall advancement of the healthcare industry (Flessa and Huebner, 2021). On the other hand, process innovation involves implementing new or improved methods, procedures, workflows, or systems that result in more efficient, effective, and streamlined healthcare delivery, patient care, and administrative processes. Social innovation addresses social challenges and aims to improve the well-being of communities through initiatives that address healthcare disparities, improve access to care for underserved populations, or implement public health interventions (Smithman et al., 2020). Service innovation involves developing new or improved services that provide value to patients through new care delivery models, patient engagement strategies, or personalized healthcare experiences. Technological innovation emphasizes developing and adopting new technologies, such as artificial intelligence, virtual reality, telemedicine platforms, and other emerging technologies, to improve patient care and medical processes (Gomes Chaves et al., 2021). These multiple forms of innovation often intersect and complement each other, driving progress and transformation in the healthcare industry.

Therefore, successful healthcare innovation requires a holistic approach considering multiple dimensions and stakeholders to achieve meaningful and sustainable improvements. This literature review with systematic bibliometrics explores organizational innovations transforming the healthcare sector and their impact on care quality.

2 Methodological Approach

The literature review with systematic bibliometrics (LRSB) methodology was used to conduct a comprehensive and objective assessment of the existing body of knowledge on organizational innovations impacting healthcare quality. This methodology offers an in-depth evaluation strategy for research trends, key contributors, influential studies, and emerging themes within healthcare organizational innovations (Rosário and Dias, 2023; 2022; Rosário et al., 2021). In addition, it ensures a rigorous and transparent assessment, enabling researchers to identify gaps, patterns, and areas of emphasis within the literature, which is essential for grasping the foundation, context, methodology, and implications of Rosário and Dias (2023, 2022), Rosário et al. (2021) paper. This study highlights patterns and gaps that can inform future empirical work and strategic planning.

The LRSB has several benefits, including a comprehensive overview of the field of study, identification of trends and patterns, assessment of the influence and impact of studies, identification of collaborations and research networks, validation and replication of research, identification of gaps in the literature and basis for decision making and policy formulation.

The LRSB methodology facilitates the identification of critical research directions, potential collaboration opportunities, and avenues for future exploration, thereby contributing to the advancement of knowledge and the strategic development of innovative healthcare practices.

The bibliometric literature analysis follows a thorough methodological approach to ensure that the findings are accurate and implementable; the process involved eight steps recommended by Rosário and Dias (2023, 2022), Rosário et al. (2021), summarized in Table 1.

Table 1. Process of systematic literature review.

Fase	Step	Description
Phase One	Step 1	Formulate the problem
	Step 2	Develop and validate the review process
Phase Two	Step 3	Search for relevant literature
	Step 4	Search for inclusion
	Step 5	Quality evaluation
	Step 6	Data extraction
	Step 7	Data analysis and synthesize
Phase Three	Step 8	Report Findings

Source: own elaboration

To start, I searched extensively through scholarly literature using the Scopus database up until July 2023. Scopus is a widely recognized database that contains over 76 million records and 24,000 peer-reviewed journals from around the world. This database is highly valuable because it offers researchers, academics, and professionals numerous benefits, including broad coverage, citation analysis, discoverability, metrics, and the opportunity for international collaboration.

Overall, Scopus is an essential tool that provides researchers and scholars with a wealth of information and resources to advance their research and foster collaboration across various fields and regions.

The Scopus database was used to search for and select relevant sources for inclusion in this research. To start, the search was extensively conducted the keywords “organizational innovation” and was limited to titles, abstracts, and keywords (Title-Abs-Key). 27,452 document results were found. However, most of these sources were spread over multiple industries where organizational innovation was crucial. Thus, the researcher added the keyword “health,” reducing the search results to 17,687 documents. Since the primary goal is to evaluate the impact of organizational innovations on care quality, the researcher added the exact keyword “health care quality,” further reducing the results to 3,273. Limiting the search to the subject area “Business, management, and Accounting” helped narrow the search down to 82 studies (N=82), which were synthesized in the final report.

A thorough evaluation was conducted on each chosen article, assessing factors like methodology, rigor, and relevance. Common themes, patterns, and gaps in literature were identified through thematic analysis. The data extracted from the selected articles was then analyzed. Combining the findings from these articles, a comprehensive overview of the current state of organizational innovation in healthcare quality was synthesized (Table 2).

A thematic analysis was conducted following an inductive approach, allowing for the identification of recurring themes, patterns, and knowledge gaps across the selected studies. This involved categorising the extracted data, comparing conceptual similarities, and clustering findings into meaningful thematic areas aligned with the objectives of this review.

Table 2. Screening Methodology.

Database Scopus	Screening	Publications
Meta-search	keyword: Organizational Innovation	27,452
First Inclusion Criterion	keyword: Organizational Innovation, health	17,687
Second screening	keyword: Organizational Innovation, health Exact keyword: Health Care Quality	3,273
Screening	keyword: Organizational Innovation, health Exact keyword: Health Care Quality Subject Area: Business, Management, and Accounting Published until July 2023	82

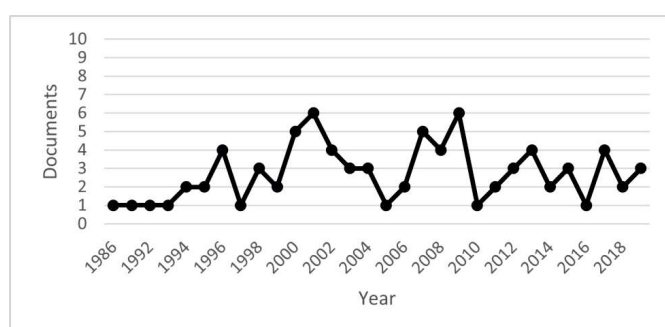
Source: own elaboration

It should be acknowledged that the research is limited to the Scopus database, which means we have not taken into account other significant scientific and academic resources.

Finally, content and theme analysis techniques were used to identify, analyze and report the various documents as proposed by Rosário and Dias (2023; 2022); Rosário et al. (2021). The search was limited to scientific and academic documents, including journal articles, conference papers, book chapters, and reviews published. The documents selected for inclusion and synthesis in the literature review are 69 articles; 9 reviews; 1 note; and 1 editorial.

3 Publication distribution

Peer-reviewed documents on organizational innovation in healthcare quality date back to 1986 - July 2023. Figure 1 summarizes the peer-reviewed literature published from 1986 - July 2023. The publications were sorted out as follows: International Journal Of Health Care Quality Assurance (24); Health Care Management Review (19); Harvard Business Review (6); Health Marketing Quarterly (5); Evaluation And Program Planning (5); Journal Of Health Organization And Management (4); Clinical Leadership Management Review The Journal Of CLMA (4); Journal Of Healthcare Management (3); Clinical Leadership And Management Review (3); Marketing Health Services (2); Journal Of Health Care Marketing (2); the rest with only 1 publication each. Interest in the topic has been the same over time.

**Figure 1.** Documents by year

Source: own elaboration

Table 3 analyses the Scimago Journal & Country Rank (SJR), the best quartile and the H index per publication.

The journal Health Care Management Review is the most cited publication with 0,830 (SJR), Q1 and H index 63. There is a total of 1 journal in Q1, 6 journals in Q2 and Journals in 2 journals in Q3, from the best quartile Q1 represents 6% of the 16 journal titles; the best quartile Q2 represents 38%, Q3 represent 13%, and finally, 7 publications without data represent 44%. As evident from Table 1, most articles on organizational innovation in healthcare quality rank on the Q2 best quartile index.

Table 2. Screening Methodology.

Title	SJR	Best Quartile	H index
Health Care Management Review	0,83	Q1	63
International Journal Of Health Care Quality Assurance	0,53	Q2	54
Evaluation And Program Planning	0,53	Q2	69
Harvard Business Review	0,43	Q2	198
Journal Of Health Organization And Management	0,42	Q2	48
Journal Of Health Organisation And Management	0,42	Q2	49
Leadership In Health Services	0,39	Q2	30
Journal Of Healthcare Management	0,38	Q3	52
Health Marketing Quarterly	0,27	Q3	30
Clinical Leadership Management Review The Journal Of CLMA	0	_*	14
Clinical Leadership And Management Review	0	_*	14
Marketing Health Services	0	_*	19
Journal Of Health Care Marketing	0	_*	5
Journal Of Hospital Marketing	0	_*	6
Journal Of AHIMA American Health Information Management Association	0	_*	18
Fortune	0	_*	16

Note: *data not available.

Source: own elaboration

The subject areas covered by the 82 scientific articles were: Business, Management and Accounting (82); Medicine (70); Nursing (22); Economics, Econometrics and Finance (7); Social Sciences (5); Psychology (5); and Health Professions (5).

The most cited article was "The performance measurement manifesto" by Robert & Eccles (1991), published in Harvard business review 0,430 (SJR), the best quartile (Q2) and with an H index (198) with 774 citations.

In Figure 2, we can analyze the evolution of citations of articles published between ≤2013 to July 2023. The number of quotes shows a positive net growth with an R2 of 29% for ≤2013 to July 2023, with 2017 reaching 117 citations.

The h-index was used to ascertain the productivity and impact of the published work based on the most significant number of articles with at least the same number of citations. Of the documents considered for the h-index, 22 have been cited at least 22 times. In Appendix I,

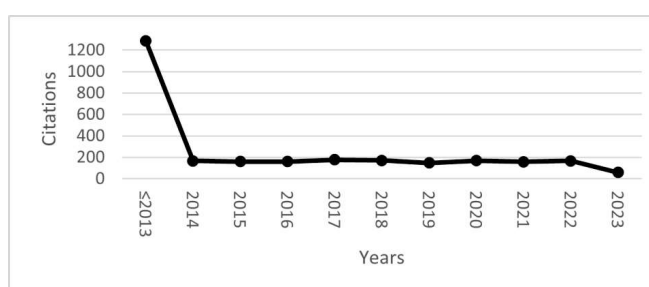


Figure 2. Evolution of citations between ≤ 2013 and 2023.

Source: own elaboration

citations of all scientific articles from ≤ 2013 to July 2023 are analyzed; 8 documents were not cited until July 2023, with a total of 2818 citations.

Using the primary keywords, a bibliometric analysis was done to look into and find indicators of the dynamics and evolution of scientific information in Figure 3. To identify the critical research keywords in organizational innovation, health, and health care Quality, bibliometric results using the academic software VOSviewe are studied.

The node's size represents the keyword—how often it's used. The link between nodes shows if keywords co-occur alone or together. The circle's thickness indicates how often keywords co-occur. Larger nodes have more frequent keyword occurrences, and links between larger nodes show higher co-occurrence rates. Nodes and links in a cluster explain the topic coverage and connections in an article. Each color defines a thematic cluster (Rosário and Dias, 2023, 2022).

An analysis of the related keywords in Figure 4 offers insight into the interconnected network of terms used across the reviewed scientific articles, thereby revealing the thematic focus of current research and highlighting potential directions for future investigation. Figure 5 illustrates the extent of bibliographic coupling, serving as a visual tool to explore patterns in citation and reference interconnectivity within the field.

4 Theoretical perspectives

Organizational innovations in healthcare represent dynamic and purposeful changes in healthcare entities' structure, processes, and practices to enhance the quality of care and patient outcomes. These innovations encompass a wide spectrum of strategies, including integrating cutting-edge technologies, optimizing workflows, fostering collaborative networks, and implementing novel care models (Miremadi and Goudarzi, 2019). By strategically harnessing these innovations, healthcare organizations can unlock substantial improvements in healthcare quality. These advancements enhance patient safety, streamline care delivery, and improve patient experiences and clinical outcomes (Montgomer et al., 2019). The synergy between organizational innovation and healthcare quality reflects an ongoing commitment to drive excellence and innovation within the ever-evolving healthcare landscape.

4.1 Defining the Organizational Innovation Concept

Within the healthcare context, organizational innovation constitutes a multifaceted concept that encapsulates deliberate and transformative changes instituted within healthcare entities to augment operational efficiency, optimize service delivery, and heighten overall healthcare quality. Conway et

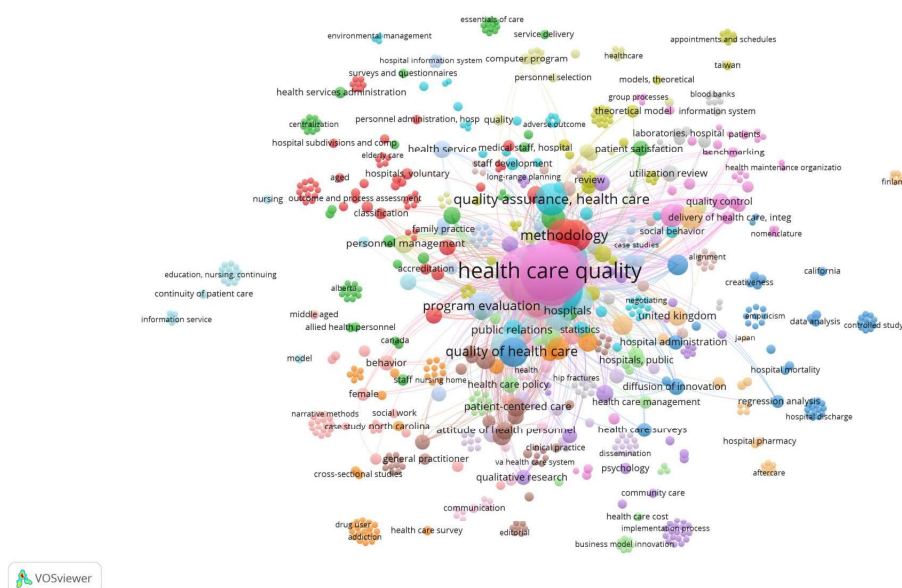


Figure 3. Network of all keywords

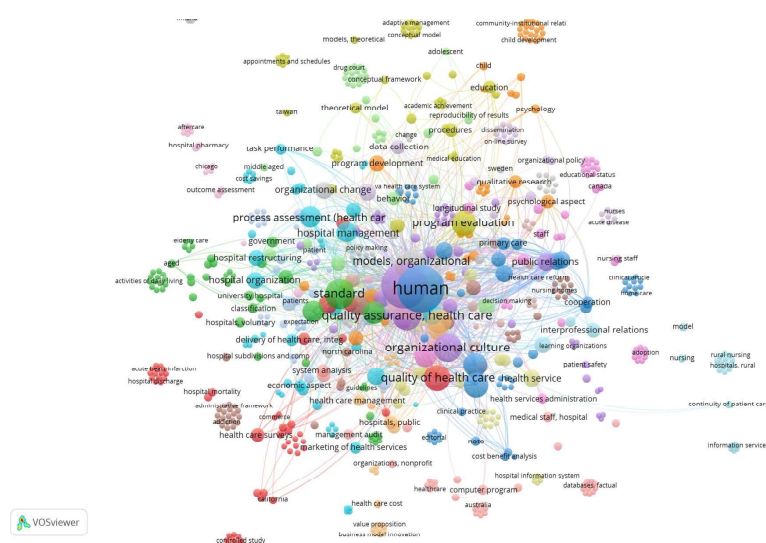


Figure 4. Network of Linked Keywords.

al. (2017, p.166) define innovation as the "widespread adoption of new technology and ideas." Lämsä et al. (2006) provided a more detailed definition that is widely accepted among researchers. They defined innovation as "the intentional introduction and application within a role, group, or organization, of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, or wider society" (p.67). This definition stands out the most since it encompasses the three most crucial components defining innovation: originality, intended benefits, and applications. The concept of organizational

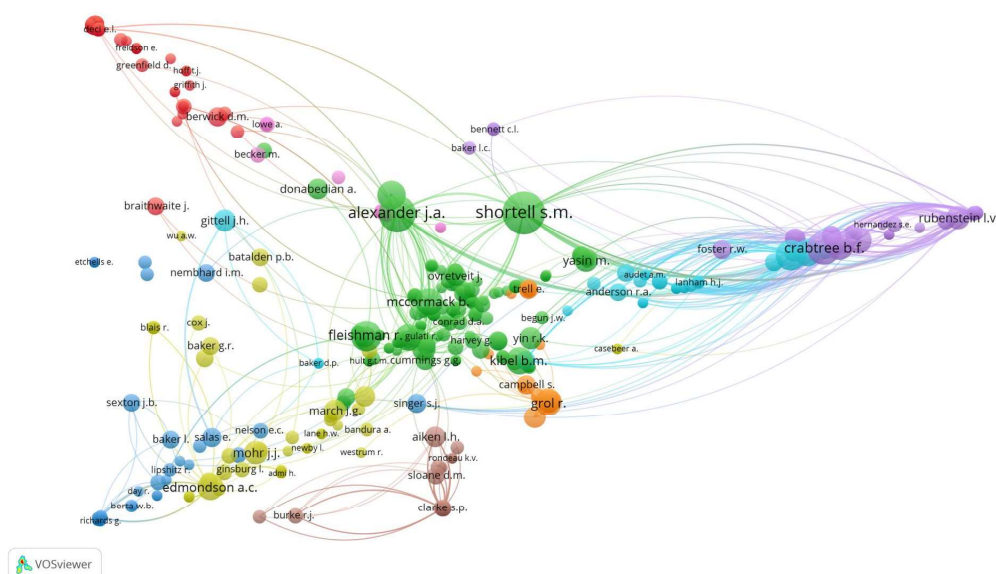


Figure 5. Network of bibliographic coupling.

innovation is rooted in theoretical perspectives from corporate management and innovation studies, thus underscoring the proactive engagement of healthcare organizations in reconfiguring their structures, processes, and practices to respond effectively to evolving industry demands and challenges. Therefore, organizational innovation is characterized by its focus on introducing novel approaches that transcend routine operations, resulting in heightened adaptability, improved patient outcomes, and heightened patient satisfaction.

At its core, organizational innovation in healthcare is manifested through a spectrum of initiatives ranging from integrating state-of-the-art technologies, such as telemedicine and artificial intelligence, to redesigning care delivery workflows and establishing collaborative partnerships among various healthcare stakeholders. The underpinning philosophy acknowledges the dynamic interplay between external environmental factors and internal organizational dynamics (Miremadi and Goudarzi, 2019). This fosters a proactive stance towards change that enables healthcare entities to navigate complex terrain while fostering a culture of continuous improvement. Organizational innovation resonates with the diffusion of innovations theory. In this case, the systematic adoption and implementation of innovative strategies within healthcare organizations contribute to improving healthcare quality by reshaping clinical practices, optimizing resource allocation, and enhancing patient-centric care paradigms (Dearing and Cox, 2018). In essence, organizational innovation in healthcare entails a strategic imperative that fosters a forward-thinking orientation. This enables healthcare entities to cultivate resilience and agility in an ever-evolving healthcare landscape, thereby enhancing care quality and supporting sustainable advancements in patient care, safety, and health outcomes.

4.2 Linking Organizational Innovation to Healthcare Quality

Organizational innovation holds the potential to revolutionize the healthcare landscape, consequently improving care quality. For instance, organizational innovation encompasses strategic initiatives that reshape structures, processes, and practices (Ostasiewski and Fugate, 1994). They significantly influence healthcare quality by fostering an environment conducive to optimal patient

outcomes, streamlined workflows, and elevated patient experiences (Hernandez et al., 2013). Brown and Brown (2001) explain that innovative organizational practices create a culture of continuous improvement, enabling healthcare organizations to adapt to emerging challenges and capitalize on novel opportunities proactively. This proactive approach translates into enhanced clinical effectiveness and heightened patient safety by implementing evidence-based care protocols, informed decision-making frameworks, and advanced diagnostic and treatment methodologies.

Additionally, integrating innovative technologies in organizational innovation profoundly impacts healthcare quality by augmenting diagnostic precision, treatment efficacy, and patient engagement. For instance, incorporating telemedicine and remote patient monitoring systems extends healthcare access to remote populations and facilitates early intervention and real-time monitoring (Piper et al., 2012). This contributes to timely interventions and minimizing adverse events. Moreover, deploying artificial intelligence and predictive analytics, as demonstrated by Mehta et al. (2019), empowers healthcare professionals with data-driven insights. This enables personalized treatment plans, early disease detection, and optimal resource allocation (Hernandez et al., 2013). Such innovations transcend the confines of conventional care paradigms, creating a significant shift towards patient-centric care models that emphasize holistic well-being and long-term health management.

4.3 Healthcare Innovations Driving Growth and Improvements in the Sector

Healthcare organizations and professionals leverage emerging innovations to transform the sector and improve care delivery (Mehta et al., 2019). For instance, the healthcare industry generates vast amounts of data from hospitals, medical research, equipment, insurance companies, and healthcare providers (Alavi and Yasin, 2008). As a result, tech experts are creating devices and systems allowing healthcare facilities to leverage this data to improve decision-making, provide patient-centered care, and improve engagement and collaboration (Balding, 2005). In this regard, innovations such as big data, artificial intelligence, and machine learning are increasingly being adopted and integrated into healthcare systems and processes (Habehh et al., 2021). This literature review section summarizes findings on various healthcare innovations transforming the industry in this digital era.

4.3.1. Digital Health Solutions

Digital health solutions encompass diverse technologies, platforms, and applications that leverage digital tools to enhance healthcare delivery and patient outcomes. These innovations bridge geographical barriers, allowing remote access to medical consultations, diagnostic services, and health information dissemination (Menachemi et al., 2008). For example, telemedicine enables real-time communication between patients and healthcare professionals, facilitating timely consultations and reducing the burden of in-person visits. However, despite its technical potential, the adoption of telemedicine remains uneven, with significant resistance noted among healthcare professionals in various disciplines, due to concerns around workload, patient safety, digital literacy, and changes in workflow. On the other hand, electronic health records (EHR) systems streamline patient information management, promoting seamless communication and coordination among care providers (Ramirez et al., 2013; Renshaw and Ireland, 2003). Some healthcare organizations have mobile health applications that empower individuals to monitor their health metrics, track medication adherence, and access personalized health resources (Flessa and Huebner, 2021). Integrating these digital health innovations expedites care delivery, promotes patient engagement, facilitates early disease detection, and contributes to evidence-based decision-making.

4.3.2. Personalized Medicine

Personalized medicine (PM) represents a paradigm shift in healthcare, tailoring medical interventions to individual patient characteristics, genetic profiles, and unique health needs. The Personalized Medicine Coalition defines PM as "the use of new methods of molecular analysis better to manage a patient's disease or predisposition to disease" (Flessa and Huebner, 2021). This approach transcends the traditional "one-size-fits-all" model, allowing healthcare professionals to optimize treatment plans based on genetic predispositions, biomarkers, and patient-specific data (Kirby et al., 2007). Advances in genomics allow precision diagnostics, enabling healthcare practitioners to identify genetic variants linked to diseases and therapeutic responses (Al-Shaqha and Zairi, 2000; Leese and Petchey, 2003). Pharmacogenomics guides medication selection and dosage adjustments and minimizes adverse drug reactions. PM minimizes trial-and-error approaches by aligning treatment strategies with patient-specific factors, thus enhancing treatment efficacy and mitigating potential risks. Consequently, this innovation contributes to improved patient outcomes and enhanced healthcare efficiency.

4.3.3. Implants

Implantable medical technologies represent a fundamental innovation of modern healthcare, facilitating interventions that address various medical conditions. For instance, advanced prosthetics and orthotics restore mobility and functionality, enhancing the quality of life for individuals with limb loss or physical impairments (Flessa and Huebner, 2021; Lee et al., 2020). Implantable cardiovascular devices, such as pacemakers and defibrillators, regulate heart rhythms and prevent life-threatening arrhythmias (Asubonteng et al., 1996). Neurostimulation devices, including deep brain stimulators, manage chronic pain and neurological disorders by modulating neural activity. These implantable innovations help alleviate symptoms, extend life expectancy, and enhance overall well-being (Stockdale et al., 2018). The convergence of medical device engineering, biocompatible materials, and surgical expertise underpins the success of implantable technologies in delivering targeted, durable, and life-transforming interventions.

4.3.4. Robotics and Automation

Integrating robotics and automation within healthcare introduces a paradigm shift in surgical procedures, diagnostics, and patient care. Robotic-assisted surgeries enhance precision and adeptness, thereby reducing patient trauma, postoperative pain, and recovery time (Flessa and Huebner, 2021). In addition, surgical robots provide surgeons with intuitive control, translating hand movements into precise surgical actions, enabling them to conduct complex procedures with enhanced accuracy (Ratia et al., 2018). Robotic rehabilitation therapies aid in the recovery of motor functions post-stroke or injury, offering tailored exercises and real-time feedback (Jain & Bhatnagar, 2019; Flessa and Huebner, 2021). Automation streamlines pharmacy operations, dispensing medication and managing inventory, thereby reducing medication errors and optimizing resource allocation. By augmenting clinical capabilities, robotics, and automation improve healthcare quality through standardized procedures, enhanced safety, and improved patient outcomes.

4.3.5 AI and Machine Learning in Healthcare

Integrating artificial intelligence (AI) and machine learning (ML) technologies revolutionizes healthcare by enabling data-driven decision-making, predictive analytics, and advanced diagnostics. Healthcare facilities and organizations generate massive amounts of data throughout the care delivery process from the hospitals to the pharmacies, insurance agencies, and other providers (Saxena, 2021). AI-powered algorithms provide tools and techniques for analyzing these vast

datasets to identify patterns, predict disease trajectories, and stratify patient risk (Mehta et al., 2019). In addition, machine learning models refine diagnostic accuracy in medical imaging, assisting radiologists in identifying subtle abnormalities and enhancing early disease detection. Natural language processing (NLP) applications help extract valuable insights from unstructured clinical notes, thus streamlining clinical documentation and enabling efficient information retrieval (Habehh & Gohel, 2021). Additionally, healthcare facilities are integrating AI-driven chatbots and virtual health assistants to provide personalized health advice, patient education, and post-discharge follow-up, fostering continuous care engagement (Tersigni, 2018). Integrating AI and ML innovations in healthcare optimize clinical workflows, enhances diagnostic precision, and facilitates evidence-based decision-making, thus improving healthcare quality and patient safety.

4.3.6 Wearable Health Technologies

Wearable health technologies encompass an array of sensor-equipped devices individuals wear to monitor physiological parameters, track health metrics, and promote wellness. For example, fitness trackers and smartwatches record physical activity, heart rate, and sleep patterns, encouraging users to embrace healthy lifestyles (Flessa and Huebner, 2021). In addition, individuals with diabetes are embracing continuous glucose monitors, which provide real-time glucose readings to manage blood sugar levels. Wearable electrocardiogram (ECG) monitors empower users to detect irregular heart rhythms and potential cardiovascular issues (Lee et al., 2020). These technologies facilitate proactive health management, allowing early intervention and informed discussions with healthcare providers (Salge and Vera, 2009). Wearable health technologies promote health-conscious behaviors, reduce preventive care, and improve patient engagement and long-term health outcomes by fostering self-awareness and building a sense of empowerment.

4.4 Impact of Organizational Innovations on Healthcare Quality

Organizational innovations provide tools, techniques, and processes that help improve healthcare quality. For instance, patient-centered innovations encourage care providers to prioritize personalized treatment plans that accommodate each patient's medical needs. In addition, technological innovations such as wearable devices empower patients to monitor their health outcomes and seek timely interventions (Lee et al., 2020). This section synthesizes research findings showcasing how organizational innovations have helped improve healthcare quality.

4.4.1 Patient-Centered Care and Patient Safety

Organizational innovations in healthcare significantly impact patient-centered care and patient safety by aligning processes and practices with patient needs and preferences. Patient-centered care requires practitioners to provide individualized, holistic, and collaborative approaches that foster active patient involvement in decision-making and care planning (Flieger, 2017). Although emerging healthcare innovations aim to facilitate communication between healthcare providers and patients and have the potential to enhance engagement and satisfaction, in practice, many organisations face challenges in achieving seamless integration. These include technological limitations, provider resistance, and variability in patient access and digital literacy. Technologies such as electronic health records (EHRs) and telehealth platforms streamline information sharing and access (Goh et al., 2013; Hennessey and Fry, 2016). This ensures a comprehensive understanding of patients' medical histories and enables remote consultations. Moreover, multiple advanced innovations are used to improve patient safety (Scheirer et al., 2008; Joseph Torres and Guo, 2004). Examples of such innovations include barcode medication administration systems and AI-driven error detection

algorithms. These innovations minimize medication errors, adverse drug reactions, and medical inaccuracies, ensuring safer healthcare delivery and improved patient outcomes.

4.4.2 Reduced Costs of Care

While the integration of digital health technologies holds potential for long-term cost savings—through streamlined operations, reduced redundancies, and improved care coordination—these benefits are often preceded by substantial investments in technology, staff training, and organisational change, and may take several years to materialise. For instance, Gentili et al. (2022) found that implementing digital health technologies such as videoconferencing, text messaging, telephone support, web platforms, and digital health portals can reduce care costs. These innovations eliminate the need for frequent in-person visits, decreasing patient transportation expenses and enhancing the efficiency of healthcare resource allocation (De Feo, 2004). In addition, streamlining administrative processes through digital health solutions, such as automated appointment scheduling and billing systems, minimizes administrative burdens and overhead costs (Gregory et al., 2010). Furthermore, the adoption of evidence-based practices and clinical pathways, driven by organizational innovations, curbs unnecessary tests, treatments, and hospital readmissions, contributing to cost containment while maintaining the quality of care.

4.4.3 Improved Hospital Efficiency

Some studies suggest that improvements in hospital efficiency may be observed in healthcare facilities that successfully implement and adapt to new technologies, systems, and organisational processes. However, these outcomes are not uniform across settings and often depend on factors such as institutional readiness, change management capacity, and long-term strategic alignment. This efficiency is associated with the multifaceted transformation encompassing streamlined processes, accelerated patient care pathways, and informed resource allocation (Mira and Lehmann, 2001). Integrating innovative strategies helps healthcare institutions mitigate operational bottlenecks and cultivate an environment conducive to delivering high-quality patient-centered care (Miller-Day et al., 2017). There are three main ways identified in research in which healthcare innovations improve efficiency; (i) improving the discharge process, (ii) enhancing the decision-making processes, and (iii) facilitating organizational change.

4.4.3.1 Efficient discharge process

Organizational innovations redefine the discharge process by seamlessly transitioning from inpatient care to post-hospital settings. For example, implementing digital health solutions, such as EHRs, facilitates comprehensive patient data sharing among care teams, allowing collaborative discharge planning and medication reconciliation (Alexander et al., 2021). In addition, real-time communication between physicians, nurses, and allied health professionals ensures that patients are discharged promptly with accurate post-discharge instructions (Berwick, 2000). This optimized discharge process enhances patient satisfaction and mitigates hospital bed congestion, efficiently utilizing limited resources.

4.4.3.2 Improved decision-making process

Inovações organizacionais fornecem aos profissionais de saúde insights oportunos e baseados em dados que podem apoiar e potencialmente aprimorar os processos de tomada de decisão clínica. Em particular, algumas entidades de saúde começaram a integrar algoritmos de inteligência artificial (IA) e aprendizado de máquina (ML) em sistemas de suporte à decisão clínica para analisar dados de pacientes, identificar tendências, avaliar fatores de risco e sugerir possíveis caminhos de tratamento (Saxena, 2021; Walley et al., 2006). Essas tecnologias demonstraram potencial

para auxiliar médicos na formulação de diagnósticos, seleção de tratamentos e personalização do atendimento (Ratia et al., 2018).

No entanto, apesar desses avanços, é crucial reconhecer que os algoritmos de IA ainda estão em desenvolvimento ativo e sujeitos a limitações e erros. Decisões imprecisas podem ocorrer, especialmente quando os médicos confiam demais em resultados algorítmicos sem aplicar seu próprio julgamento médico. Delegar decisões clínicas inteiramente à IA, sem interpretação humana crítica, pode levar a resultados abaixo do ideal ou até mesmo prejudiciais. Portanto, embora a IA possa aprimorar a tomada de decisões ao aumentar a velocidade e o acesso aos dados, ela deve ser considerada uma ferramenta complementar — projetada para ampliar, e não substituir, a expertise e o raciocínio contextual dos profissionais médicos (Mehta et al., 2019; Habehh & Gohel, 2021).

4.4.3.3 Organizational change

Innovations foster transformative changes in hospital cultures and practices, promoting a dynamic environment of adaptability and continuous improvement. As a result, innovative initiatives instigate shifts in organizational norms, consequently encouraging employees to rethink traditional approaches and embrace novel strategies that streamline processes and achieve desired goals (Hoff and Scott, 2017; Booth, 1996). This may involve adopting techniques that help systematically identify inefficiencies, minimize redundancies, and enhance the overall workflow (Eckhart, 2003). The embrace of organizational change ensures that hospitals operate in a manner that is agile and responsive to evolving healthcare needs, ultimately leading to optimized resource allocation and improved patient care.

4.4.4 Cross-functional Teams and Process Improvement

Implementing organizational innovations often requires cross-functional teams combining diverse expertise to collaborate on process improvement initiatives. For instance, the team can include tech experts, nurses, clinicians, researchers, and management (Andrews et al., 2001). Such a team can ensure access to technical and medical information and resources throughout the planning, development, and implementation phases (Gittel et al., 2015). Teams working in innovative initiatives facilitate interdisciplinary communication and knowledge sharing, breaking down silos and promoting a comprehensive approach to healthcare challenges. In addition, they may adopt process improvement methodologies, such as the Lean Six Sigma, which help identify inefficiencies, reduce waste, and streamline workflows (Goh et al., 2013). Cross-functional teams engage in collaborative problem-solving, thus driving continuous enhancement of care delivery processes. This results in heightened efficiency, reduced errors, and enhanced patient experiences.

4.4.5 Improved Access to Knowledge

In the rapidly evolving landscape driven by technological advancements, integrating innovative solutions enables healthcare professionals to access a wealth of medical knowledge, research findings, and evidence-based practices with unprecedented ease and efficiency (Berwick, 2000; Czuchry et al., 2000). Innovations such as digital libraries, online databases, and medical journals enable quick retrieval of up-to-date clinical information. These resources provide healthcare professionals with a comprehensive and readily accessible source of knowledge that informs their decision-making processes, fosters continuous learning, and facilitates evidence-based practice (Miller-Day et al., 2017). Moreover, knowledge-sharing platforms and teleconsultation networks facilitate interdisciplinary collaboration, allowing healthcare professionals to seek expert opinions and share insights across geographical boundaries (Ritonja and Hočevár, 2001). As a result,

these innovations have significantly empowered healthcare providers to make informed decisions, optimize treatment strategies, and enhance patient care.

4.4.6 Partnerships and Leadership

Leveraging new innovations to improve healthcare quality requires establishing collaborative partnerships among healthcare entities and fostering a networked approach to healthcare delivery. Cooperative arrangements between hospitals, primary care providers, and community-based organizations ensure seamless care transitions and comprehensive patient support (Conway et al., 2017). In addition, partnerships between healthcare organizations and research centers can drive the development of cutting-edge treatments, medical devices, and therapies. However, the success of these collaborative arrangements is hugely dependent on leadership (Sherman, 2002; Baker, 2002). For instance, transformational leadership fosters a culture of innovation, aligns organizational goals with patient-centered values, and empowers employees to contribute to continuous improvements in healthcare quality. In addition, effective leadership sets goals for the innovations and communicates their importance to stakeholders to ensure collective commitment and adoption (Crunkilton, 2009). Therefore, partnerships and leadership are crucial in the advancements in healthcare delivery, patient outcomes, and the overall improvement of the healthcare industry.

4.4.7 Prevention of Adverse Events

Multiple organizational innovations substantially contribute to preventing adverse events. For instance, enhanced surveillance, early warning systems, and risk mitigation strategies can be used to identify and avoid an adverse event (Chuang et al., 2007). In addition, automated monitoring systems, such as electronic alerts for medication interactions, notify healthcare providers of potential risks, enabling prompt interventions (Hellman et al., 2015; Lasater et al., 2019). Some healthcare facilities implement root cause analysis frameworks in their organizational innovation initiatives to investigate adverse events (Foldevi et al., 1996). These frameworks identify system weaknesses and potential functional problems, allowing professionals to implement preventive measures. Therefore, these innovations bolster patient safety and care quality by minimizing errors, reducing harm, and fostering a culture of vigilance within healthcare organizations.

4.4.8 Government Regulations

With more healthcare facilities and organizations adopting new technologies, governments are establishing regulations and standards guiding innovations' proper and ethical use. These laws are meticulously designed to ensure the provision of safe, efficient, and high-quality healthcare services (Fleishman, 1998). The alignment of organizational innovations with these regulations enhances patient safety, strengthens data security, and upholds ethical standards in healthcare delivery. For instance, healthcare institutions must adhere to rigorous quality standards set by regulatory bodies, such as the Joint Commission or the Centers for Medicare and Medicaid Services (CMS). Implementing innovative practices enables healthcare organizations to address specific quality improvement mandates, ensuring that care delivery aligns with evidence-based guidelines and benchmarks (Fleishman, 2002; Hearld et al., 2012). Moreover, some government regulations emphasize the importance of data transparency, reporting accuracy, and interoperability in healthcare systems. Organizational innovations respond to these imperatives by introducing technologies that facilitate seamless data exchange and reporting (Hsieh, 2009). For example, the health information exchange (HIE) systems and interoperable electronic health records (EHRs) empower healthcare providers to share patient information securely and efficiently across different

care settings (Kalafat et al., 2007). This capability streamlines care coordination, enhances care transitions, and ensures patient information is readily accessible to authorized stakeholders. The systematic sharing of patient data through such innovations aligns with regulatory mandates and augments clinical decision-making, leading to more informed interventions and improved patient outcomes.

Moreover, organizational innovations are pivotal in ensuring ethical and legal compliance within the healthcare sector. As regulations evolve to encompass areas such as patient privacy, data protection, and informed consent, healthcare organizations must adapt their practices accordingly (Hoffart et al., 1995; Kash et al., 2013). Innovations such as advanced cybersecurity measures, encrypted communication platforms, and patient consent management systems enhance compliance with regulations such as the Health Insurance Portability and Accountability Act (HIPAA) and the General Data Protection Regulation (GDPR). These innovations safeguard patient rights, protect sensitive information, and mitigate legal risks, thereby fostering trust between patients and healthcare providers.

4.4.9 Improved Job Satisfaction and Outcomes

Organizational innovations catalyze job satisfaction among healthcare professionals, thus elevating employee well-being and profoundly impacting patient outcomes. For instance, integrating innovative technologies helps streamline workflows and reduce administrative complexities that often contribute to workplace stress (Goh et al., 2013; Liu & Dubinsky, 2000). This optimization of processes empowers healthcare professionals to allocate more of their valuable time to direct patient care, nurturing a sense of purpose and fulfillment integral to their roles (Levin-Scherz, 2001). Besides, technological tools such as EHRs and mobile communication platforms empower healthcare providers to communicate seamlessly with colleagues and facilitate efficient care coordination and collaborative decision-making. As a result, the frustrations stemming from communication bottlenecks are mitigated, further improving job satisfaction.

Higher job satisfaction among healthcare professionals often translates into heightened morale and reduced burnout rates, improving clinical performance. Professionals experiencing job satisfaction are more likely to exhibit heightened engagement and commitment to delivering optimal care (Wade and Kleiner, 1998). This engagement, in turn, is reflected in their interactions with patients since they are more attentive, empathetic, and motivated to provide comprehensive care (Bruton et al., 1995; Hammer and Stanton, 1999). This virtuous cycle culminates in improved patient experiences characterized by personalized attention, effective communication, and an overall sense of trust. The impact of these positive interactions can extend to improved patient adherence to treatment plans, more accurate health assessments, and, ultimately, better health outcomes.

4.4.10 Consumer Value Cocreation in Health Care

Adopting organizational innovations in healthcare contributes to a shift in the dynamics of patient-provider relationships. As a result, research shows a significant transition from a traditional hierarchical model to one characterized by collaborative value co-creation (Nambisan and Nambisan, 2009). This transformative approach is grounded in patient engagement and empowers individuals to play an active role in their care decisions, aligning care plans with their unique preferences, needs, and circumstances (Walley and Gowland, 2004). The value co-creation outcome requires the integration of patient-centric technologies, such as patient portals and shared decision-making tools (Loegstrup et al., 2009). These innovations give patients access to their health records, test results, and treatment options. This transparency fosters informed decision-making, enabling patients to actively contribute to determining their care trajectories.

Virtual health communities further strengthen the potential of organizational innovations in fostering consumer value co-creation. These digital platforms facilitate peer-to-peer interactions, enabling patients to share experiences, seek advice, and collaborate with their peers and care teams (Steele Jr., 2011). In addition, patient feedback, preferences, and insights generated from these interactions are seamlessly integrated into the care planning process, tailoring treatment strategies to individual holistic needs (Rosemond et al., 2012). The co-creative partnership between patients and healthcare providers empowers patients with a sense of agency and ownership over their health and enriches healthcare professionals' knowledge base (Shakibaei, 2019; South, 2001). These impacts ultimately result in improved treatment adherence, greater patient satisfaction, and more effective chronic disease management, which elevate healthcare quality and drive positive health outcomes.

4.5 Barriers and Challenges in Implementing Organizational Innovations

Despite the opportunities and benefits of organizational innovations, most healthcare facilities struggle with adoption and implementation. As a result, they need to optimize the innovations' full potential to achieve optimal performance and deliver the highest quality care. This section synthesizes data on the multiple barriers and challenges undermining the implementation of organizational innovations in healthcare.

4.5.1 Cultural and Resistance Factors

Resistance to change stemming from ingrained cultural norms and entrenched practices is a major hindrance in implementing organizational innovations. Healthcare organizations often possess deeply rooted traditions and established routines, making adopting innovative strategies a complex endeavor (Eckhart, 2003; Shank & Gilbert, 1993). For example, professionals within these institutions might resist change due to fear of the unknown, perceived disruptions to established workflows, or concerns about the impact on their roles (Alavi and Yasin, 2008). Overcoming cultural barriers necessitates comprehensive cultural assessments, leadership alignment, and fostering a shared vision that communicates the value and necessity of organizational innovations (Yasin et al., 2002). Moreover, establishing open communication channels and cultivating a culture that embraces experimentation and continuous improvement is paramount to addressing resistance and ensuring the successful assimilation of innovative practices.

4.5.2 Regulatory and Legal Constraints

Navigating the complex landscape of regulations and legal constraints poses a substantial hurdle to implementing organizational innovations in healthcare. Innovations often require compliance with stringent regulations, such as those pertaining to patient privacy (HIPAA) or the validation of medical devices (FDA). These regulations are intended to safeguard patient welfare and ensure the integrity of healthcare practices (Fleishman, 2002; Lofgren et al., 2007). However, the intricate process of aligning innovations with regulatory standards can result in delays, increased costs, and administrative burdens (Gomes Chaves et al., 2021). Overcoming this challenge necessitates a comprehensive understanding of the regulatory landscape and collaboration with legal experts (Alavi and Yasin, 2008). Proactive measures to ensure that innovations comply with ethical principles and legal mandates are also necessary. Additionally, engaging with regulatory bodies and advocating for flexible frameworks that accommodate innovative approaches is crucial to navigating these constraints effectively.

4.5.3 Resource Limitations

Resource limitations, such as financial, human, and technological constraints, represent a significant barrier to successfully implementing organizational innovations. For instance, adopting new technologies may require training programs and change management initiatives requiring substantial investments (Lukas et al., 2007). Besides, financial constraints might undermine the acquisition of cutting-edge technologies or hinder the resource allocation needed for comprehensive training and skill development (South, 2001). Human resources, including skilled personnel capable of driving and sustaining innovation, might be scarce (Mallidou et al., 2011). Overcoming these limitations necessitates strategic resource allocation, partnership development, and exploring creative funding models. Collaborative efforts between healthcare organizations, research institutions, and industry partners can alleviate resource limitations, enabling the effective implementation and long-term sustainability of organizational innovations.

4.5.4 Interdisciplinary Collaboration and Communication

The inherent silos and compartmentalization often observed within healthcare organizations can hinder information sharing and collaborative efforts. Disparate departments, with varying priorities and communication styles, might struggle to align their efforts toward a shared innovative goal. Bondurant (2020) identifies silo-working as a common practice in healthcare that is often associated with poor communication, lack of collaboration, and appropriate knowledge exchange. As a result, this traditional working model hinders collaboration and decision-making, thus reducing trust and negatively affecting the processes, organization, providers, and patients (Margoluis et al., 2009; Peltokorpi et al., 2008). Overcoming this challenge requires fostering a culture of cross-functional teamwork, enhancing communication channels, and establishing formal mechanisms for interdisciplinary collaboration (Numerof and Abrams, 1998). In addition, leadership commitment to facilitating open communication and creating platforms for knowledge exchange fosters a collaborative environment where diverse perspectives contribute to the successful implementation of innovative practices.

4.5.5 Ineffective Change Management Strategies

While change management strategies are essential for successful organizational innovation, they can present a complex challenge within the healthcare sector. Implementing innovative practices necessitates a departure from established routines, which can trigger resistance, uncertainty, and apprehension among stakeholders (Meliones, 2000). For example, healthcare professionals accustomed to well-established practices may harbor concerns about disruptions to their routines, potential shifts in job roles, or uncertainties regarding the outcomes of the innovation. A lack of clear and transparent communication can worsen this situation, especially since miscommunication can lead to rumors, misunderstandings, and distrust (McIntosh et al., 2014; Alexander et al., 2021). Another issue that can result in ineffective change management is rapid changes, which may make staff feel overwhelmed or unprepared (Bondurant, 2020). For example, when a healthcare facility fails to provide a comprehensive training program, the employees may lack the confidence and proficiency needed to successfully utilize the innovation (Esdar et al., 2021). As a result, they may experience frustrations, errors, and low adoption rates, which can result in incomplete or superficial adoption. Therefore, organizational leaders must be committed and actively provide the necessary support to help employees embrace innovations.

5 Conclusions

Organizational innovations are fundamental to the healthcare sector's development and evolution. These innovations can be classified in multiple ways, including product or service innovations, technologies, structural changes, and regulatory guidelines and standards. They encompass diverse advancements ranging from digital health solutions to personalized medicine, robotics and automation, AI, ML, and implantable technologies. These innovations continue to reshape the landscape of patient care, promoting patient-centred approaches, enhancing safety measures, and streamlining workflows. Besides, innovations such as mobile apps and patient portals empower patients to participate in their treatment decisions actively, thus fostering improved healthcare quality and patient safety. Integrating advanced technologies and process improvements enhances hospital efficiency, evident in efficient discharge processes, informed decision-making, and dynamic organizational changes that optimize resource utilization and elevate overall patient outcomes. Collaborative efforts across disciplines, coupled with improved access to knowledge and strategic partnerships, form a robust foundation for enhanced care coordination, preventive measures, and adherence to governmental regulations, which collectively improve healthcare quality. Successful integration of organizational innovations presents remarkable potential for healthcare to evolve, improve job satisfaction and outcomes, and contribute to a paradigm shift toward consumer value co-creation that empowers patients and significantly elevates healthcare quality.

Despite these positive impacts, organizational innovations are vulnerable to multiple challenges and barriers undermining implementation. For example, cultural resistance and regulatory constraints may impede the assimilation of creations, while resource limitations can hinder their widespread adoption. In addition, ineffective interdisciplinary collaboration and strategic change management strategies can hinder adoption. For instance, a healthcare facility without a collaborative culture will struggle to implement innovations that require teamwork to gather diverse perspectives and skills. Lack of a shared goal, clear communication, and supportive leadership can hinder a healthcare organization's ability to leverage innovation opportunities. Therefore, stakeholders in the healthcare sector must collaborate and address these challenges to achieve optimal success and high adoption rates.

In this context, organizational innovation in healthcare quality refers to implementing new and creative approaches within healthcare organizations to enhance the quality of patient care, improve outcomes, and optimize operational efficiency. It involves the integration of novel ideas, technologies, processes, and management strategies to address the complex challenges faced by healthcare providers and improve the overall patient experience. Incorporating advanced technologies and digital solutions into healthcare practices can streamline processes, enhance data management, and improve communication between healthcare providers and patients. This may include adopting electronic health records, telemedicine, remote patient monitoring, and data analytics to identify patterns and improve decision-making. Focusing on patient needs and preferences is crucial for delivering high-quality healthcare. Organizational innovation may involve patient engagement initiatives, shared decision-making, and personalized care plans that consider individual circumstances and preferences.

Healthcare organizations continuously seek ways to optimize their processes to reduce errors, eliminate waste, and improve efficiency. Effective organizational innovation involves setting clear quality metrics and regularly measuring outcomes to identify areas for improvement. This may include monitoring patient satisfaction, infection rates, readmission rates, and other relevant indicators. Collaboration among healthcare professionals and departments promotes a more holistic approach to patient care. Innovative healthcare organizations facilitate effective communication

and cooperation among physicians, nurses, therapists, and other healthcare team members. Emphasizing a culture of continuous learning allows healthcare professionals to stay updated with the latest medical advancements and best practices. This can be achieved through regular training sessions, workshops, and access to educational resources.

Applying evidence-based practices ensures that decisions about patient care are grounded in the latest research and clinical evidence. Healthcare organizations may adopt protocols and guidelines based on current scientific knowledge.

Implementing safety protocols and creating a safety culture is essential to prevent medical errors and adverse events. Healthcare organizations may use tools like checklists and safety reporting systems to enhance patient safety. Exploring alternative payment models, such as value-based care, can incentivize healthcare providers to focus on patient outcomes rather than the volume of services provided.

Successful organizational innovation in healthcare quality requires strong leadership, a commitment to change, and a willingness to embrace new ideas and technologies. By fostering a culture of innovation, healthcare organizations can drive continuous improvement and ultimately deliver better patient care.

Organizational innovation in healthcare quality has both theoretical and practical implications that are crucial for advancing the field: (i) Studying organizational innovation in healthcare quality contributes to a deeper theoretical understanding of how healthcare systems operate. It sheds light on the complexities of healthcare delivery, including the role of organizational structures, processes, and cultures in shaping quality outcomes; (ii) Research in this area can contribute to the development of theoretical frameworks that explain the mechanisms through which organizational innovation influences healthcare quality. This may involve drawing from theories in organizational behavior, innovation management, and healthcare management to build a comprehensive understanding of the topic; (iii) Organizational innovation in healthcare quality is inherently multidisciplinary, drawing insights from fields such as management, economics, sociology, and public health. Theoretical exploration in this area can facilitate cross-disciplinary dialogue and collaboration, enriching the theoretical perspectives applied to healthcare quality improvement; (iv) Insights from research on organizational innovation can inform practical strategies for improving healthcare quality. This includes implementing new organizational structures, processes, and technologies aimed at enhancing patient outcomes, safety, and satisfaction; (v) Healthcare organizations often face resistance to change when implementing innovations. Practical implications of research in this area include guidance on effective change management strategies, leadership approaches, and stakeholder engagement techniques to facilitate the adoption of innovative practices; (vi) Organizational innovations can help healthcare providers optimize resource utilization while maintaining or improving quality. Practical implications may include recommendations for reallocating resources, streamlining workflows, and leveraging technology to achieve greater efficiency without compromising care quality; (vi) Organizational innovations that prioritize patient-centered care can lead to improved patient experiences and outcomes. Practical implications include designing care delivery models that empower patients, enhance communication and collaboration between providers and patients, and promote shared decision-making; (vii) Insights from research on organizational innovation in healthcare quality can inform policy-making and regulatory efforts aimed at improving healthcare delivery. Practical implications may include recommendations for policy interventions that incentivize innovation, promote transparency, and hold healthcare organizations accountable for delivering high-quality care.

In conclusion, organizational innovation in health care quality has significant theoretical implications for advancing our understanding of health care systems and quality improvement

processes. Specifically, this study contributes to the literature by consolidating fragmented research through a systematic bibliometric review, identifying core thematic clusters, and highlighting emerging areas of inquiry such as the role of AI, cross-sector collaboration, and human-centred innovation practices.

By mapping the intellectual structure of the field and exposing existing research gaps, this review offers a clearer conceptual foundation for future studies and supports the development of more effective, evidence-based strategies to enhance health care quality. Moreover, it offers practical insights that can guide healthcare organizations, policymakers, and stakeholders in implementing effective strategies to enhance the quality of care delivery.

We must recognize that our research is confined to the use of the Scopus indexing database alone, thereby excluding consideration of other substantial scientific and academic resources.

The field of organizational innovation in health care quality was already a rapidly evolving and important area of research. However, given the dynamic nature of the healthcare industry and continuous advancements in technology, several lines of future research are emerging: (i) integrating artificial intelligence and machine learning into healthcare systems offers promising opportunities for enhancing the quality of care. Future research could focus on developing AI-driven decision support tools, predictive analytics, and automated processes to optimize patient outcomes, reduce errors, and improve resource utilization; (ii) as our understanding of genomics and personalized medicine improves, research could delve into how tailored treatments and patient-centred care models impact healthcare quality. This would involve examining the effectiveness of personalized interventions and the challenges of implementing them on a larger scale; (iii) exploring advanced data analytics techniques, such as natural language processing and real-time data analysis, could lead to more comprehensive quality metrics. Researchers might investigate how these metrics can better capture the multidimensional aspects of healthcare quality and contribute to performance improvement; (iv) telemedicine and virtual healthcare, future research could focus on assessing the quality of telemedicine services, identifying best practices, and understanding the impact of virtual healthcare on patient outcomes; (v) further research could investigate how enhancing health information exchange and data interoperability can positively influence care coordination, patient safety, and overall healthcare quality; (vi) investigating innovative strategies for quality improvement in resource-constrained environments could have significant implications for improving health outcomes on a global scale; (vii) future research could explore the impact of technological innovations on healthcare staff, patient-provider interactions, and the potential for unintended consequences affecting quality; and (viii) research could continue to explore novel quality improvement approaches, such as gamification, incentivization, and social network interventions, to drive positive changes in healthcare delivery and patient outcomes.

It's essential to note that these future lines of research will require multidisciplinary collaboration and a willingness to adopt new methodologies and technologies to keep pace with the rapidly evolving healthcare landscape.

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7 Appendix

The table in Appendix I continues on the following page.

Appendix 1. Overview of document citations period ≤2013 to 2023.

Documents	≤2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Role of a hospital accreditation program in developing a pro ...	2019	-	-	-	-	-	-	-	-	2	2	4
Developing an innovative business model for hospital service ...	2019	-	-	-	-	-	-	3	1	1	1	5
Magnet hospital recognition in hospital systems over time	2019	-	-	-	-	1	4	2	4	4	-	15
Fostering evidence-based quality improvement for patient-cen ...	2018	-	-	-	-	1	-	4	3	4	-	12
Implementing the patient-centered medical home in complex...	2017	-	-	-	1	2	1	2	3	4	1	14
A tale of four practices: A comparative analysis of high and ...	2017	-	-	-	-	1	2	-	-	-	-	3
Partnership for patients: Innovation and leadership for safe ...	2017	-	-	-	1	1	-	1	1	-	-	4
The strategic nature of individual change behavior: How phys ...	2017	-	-	-	1	1	1	1	-	1	-	5
Improving patient and staff outcomes using practice developm ...	2016	-	-	-	-	1	1	-	-	-	-	2
Explaining process orientation failure and success in health ...	2015	-	-	1	1	2	4	1	1	1	-	10
Implementing action research in hospital settings: a systema ...	2015	-	1	-	1	1	1	5	6	4	1	20
Teamwork methods for accountable carecare: Relational...	2015	-	1	4	9	5	9	7	2	8	1	46
Illusion or delusion - Lean management in the health sector	2014	-	1	4	5	8	5	7	8	5	3	46
Health care administrators' perspectives on the role of abso ...	2013	-	3	4	2	-	1	-	2	1	2	15
Teamwork, organizational learning, patient safety and job ou ...	2013	1	3	4	5	3	5	10	7	11	1	57
Patient-centered innovation in health care organizations: A ...	2013	-	1	2	4	5	6	3	5	4	2	38
Development of a culture of sustainability in health care or ...	2013	-	2	1	3	4	2	3	2	6	2	29
Fostering change within organizational participants of multi ...	2012	1	1	2	2	-	-	2	1	1	1	12
Implementing person-centered care in nursing homes	2012	1	5	6	2	9	5	6	7	5	1	52
Assessing state substance abuse prevention infrastructure th ...	2012	1	1	4	2	-	-	2	1	1	-	13

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Appendix 1. Overview of document citations period ≤2013 to 2023 (continued).

Documents	≤2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Assessing state substance abuse prevention infrastructure th ...	2012	1	1	4	2	-	1	-	2	1	1	13
Staff, space, and time as dimensions of organizational slack ...	2011	-	1	1	-	-	1	2	2	1	4	14
Predictors of perceived health care quality for registered n ...	2010	1	1	1	-	-	1	1	-	-	-	5
GP and staff evaluation of the maturity matrix as a tool to ...	2009	4	-	-	-	-	-	-	-	-	-	4
Models of consumer value cocreation in health care	2009	10	10	10	7	15	8	9	13	3	8	97
Taking patients' voices into account within quality systems: ...	2009	1	1	1	-	2	1	1	-	1	1	9
Staff and client perspectives on the Journey Mapping online ...	2009	-	1	1	-	-	1	1	1	2	-	8
Using conceptual models as a planning and evaluation tool in ...	2009	30	8	5	9	13	7	9	11	16	2	119
Hospital innovativeness and organizational performance: Evid ...	2009	18	8	3	9	9	5	4	5	9	10	84
Defining sustainability outcomes of health programs: Illustr ...	2008	19	4	5	4	6	6	4	8	2	2	62
Stakeholder approach for evaluating organizational change pr. ...	2008	3	-	2	1	3	4	3	1	-	-	20
The role of quality improvement initiatives in healthcare op ...	2008	2	-	1	1	1	1	-	1	1	-	9
Hospital quality of care: Does information technology matter ...	2008	53	5	5	5	2	5	1	6	1	2	77
A study of the effects of innovative and efficient practices ...	2007	3	1	2	-	-	1	-	1	2	-	10
Learning from preventable adverse events in health care orga ...	2007	19	4	5	6	1	2	2	1	6	3	48
Transformational change in health care systems: An organiza...	2007	94	29	20	27	25	31	16	15	19	9	315
The relationship between implementation fidelity and educati ...	2007	19	2	2	-	2	2	-	-	1	-	30
Marketing the health care experience: Eight steps to infuse ...	2007	2	-	-	-	1	-	1	-	-	-	4
How the VA ealed itself	2006	5	1	-	-	-	-	-	-	-	-	7
Health-care process improvement decisions: A systems. ...	2006	9	3	1	3	1	-	2	1	-	-	20

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Appendix I. Overview of document citations period ≤2013 to 2023 (continued).

Documents	≤2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Embedding organisational quality improvement through...	2005	16	2	1	-	3	-	3	1	3	-	29
Quality improvement techniques to improve patient satisfacti ...	2004	10	3	5	3	4	4	1	-	-	30	
Completing the circle: From PD to POSA	2004	19	5	1	3	2	4	1	1	-	1	44
Why are employers prodding health-care providers to adopt ne ...	2004	2	-	-	1	-	-	-	-	-	-	3
Specialty audit leads - Has this concept been effective in i ...	2003	1	-	-	-	-	-	1	-	-	-	2
Achievements of the first wave personal medical services (PM ...	2003	-	-	-	-	-	-	-	-	1	-	1
An empirica! investigation of the effectiveness of contem por ...	2002	12	1	1	-	-	3	1	1	-	-	19
The RAF method for regulation, assessment, follow-up and...	2002	3	-	-	1	-	-	-	-	-	-	4
Health-Care Managers in the Complex World of Hea...	2002	2	-	-	-	-	-	-	-	-	-	2
Redesigning geriatric healthcare: How cross-functional teams ...	2001	2	-	-	-	-	-	-	-	1	-	3
Will disruptive innovations cure health care?	2001	1	-	-	-	-	-	-	-	-	-	1
Will disruptive innovations cure health care?	2001	-	1	-	-	-	-	-	-	-	-	1
Financial impact of work process redesign: experiences of fo ...	2001	1	-	-	-	-	-	-	-	-	-	1
Pre-analytical Workflow Analysis Reveals Simple Changes...	2001	1	-	-	-	-	-	-	-	-	-	1
Redesign of healthcare processes classification to improve t...	2001	5	1	1	-	-	-	-	-	-	-	7
Knowledge always on call: for does, practicing medicine will ...	2000	2	-	-	-	-	-	-	-	-	-	2
Saving money, saving lives.	2000	45	2	1	1	2	2	1	2	4	1	61
Consumers' perceptions of health care: The case of hong kong	2000	-	-	1	-	-	-	-	-	-	-	1
An open system approach to process reengineering in a health ...	2000	6	-	-	-	1	-	-	-	-	-	7
Re-engineering pharmaceutical care: Towards a patient-focus ...	2000	6	2	2	-	-	1	-	-	-	12	

Appendix I. Overview of document citations period ≤2013 to 2023 (continued).

Documents	≤2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
How process enterprises really work.	1999	20	11	17	12	8	10	12	7	8	5	333
Clinics go electronic: two stories from the field.	1999	-	-	-	-	-	-	-	-	-	-	1
Reengineering the delivery of care	1998	-	-	-	-	-	-	-	-	-	-	1
Practices of excellent companies in the managed health care ...	1998	-	-	-	-	-	-	1	-	-	-	2
What's wrong with strategy?	1997	2	4	1	3	1	3	2	3	2	-	68
Using simulation in out-patient queues: A case study	1996	3	1	4	1	2	1	1	1	-	-	29
The evolution of quality in the US health care industry: An ...	1996	-	-	-	-	-	-	-	-	-	-	4
Health service delivery to outback South Australia: A story ...	1996	-	-	-	-	-	-	-	-	-	-	3
Problem-based medical education in general practice and heal ...	1996	1	-	-	-	-	-	-	-	-	-	4
Implementation of a professional practice model for nursing ...	1995	-	-	-	-	-	-	-	-	-	-	5
Strategic planning in hospitals: A review and proposal	1995	-	-	-	-	-	-	-	-	-	-	12
Implementing the patient circle: Call on patients to help im ...	1994	-	-	-	-	-	-	-	-	-	-	3
An internal marketing approach to total service quality: A g ...	1993	-	-	-	-	-	-	-	-	-	-	2
The performance measurement manifesto.	1991	543	30	43	32	23	19	17	15	15	7	774
Optimizing identity: a marketing imperative for health care ...	1986	2	-	-	-	-	-	-	-	-	-	2
Total	1	285	166	161	160	177	147	169	158	166	59	2818

Source: own elaboration

Biographies



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