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Business model innovation in healthcare: A theoretical review of entrepreneurial strategies in the medical sector

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Abstract

This theoretical review explores the critical role of business model innovation in the healthcare industry, focusing on entrepreneurial strategies within the medical sector. With the constant evolution of healthcare needs, technologies, and regulations, traditional models are becoming increasingly insufficient to meet the demands of patients, providers, and other stakeholders. Business model innovation offers a pathway for organizations to adapt, thrive, and deliver value in this dynamic landscape. Drawing upon existing literature and case studies, this paper examines the fundamental concepts of business model innovation and its application within healthcare. It explores various entrepreneurial strategies, including opportunity identification, collaboration, technology integration, and patient-centered approaches, highlighting their impact on reshaping the healthcare ecosystem. Furthermore, the theoretical framework delineates key components of successful business model innovation, such as value proposition design, revenue model development, infrastructure optimization, and customer segmentation. Through analysis of real-world examples and challenges, this review elucidates the opportunities and barriers associated with business model innovation in healthcare. It underscores the importance of fostering a culture of innovation, promoting interdisciplinary collaboration, and addressing regulatory complexities to drive sustainable change. Additionally, it outlines future directions for research, implications for healthcare practitioners and policymakers, and the imperative for continuous adaptation and improvement. Ultimately, this review contributes to a deeper understanding of how entrepreneurial strategies can catalyze business model innovation in healthcare, paving the way for enhanced quality, accessibility, and affordability of healthcare services in the digital age.

Keywords: Business Model; Innovation; Healthcare; Theoretical; Entrepreneurial Strategies; Medical Sector.

1. Introduction

The healthcare industry is a vast and complex ecosystem encompassing various stakeholders, including healthcare providers, payers, pharmaceutical companies, medical device manufacturers, policymakers, and patients (Adefemi et al., 2023). It plays a pivotal role in promoting public health, addressing medical needs, and advancing scientific research. The industry is characterized by rapid technological advancements, evolving regulatory frameworks, demographic shifts, and increasing consumer expectations. Traditionally, healthcare delivery has been centered around hospitals, clinics, and other care facilities, with a focus on acute care and disease management. However, the landscape is undergoing significant transformation driven by factors such as aging populations, rising chronic disease burden, escalating healthcare costs, and the growing importance of preventive and personalized medicine (Olorunsogo et al., 2024). As a result, there is a pressing need for innovative approaches to healthcare delivery, financing, and administration.

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Business model innovation is essential for the sustainability and competitiveness of organizations operating in the healthcare sector (Sengupta, 2013). Unlike product or service innovation, which focuses on developing new treatments, technologies, or therapies, business model innovation entails rethinking the fundamental logic and mechanisms through which value is created, delivered, and captured within an organization. In the context of healthcare, business model innovation can lead to transformative changes in how healthcare services are accessed, delivered, and financed. It enables organizations to address emerging challenges, capitalize on market opportunities, improve operational efficiency, enhance patient outcomes, and create sustainable competitive advantages. Moreover, business model innovation is crucial for fostering collaboration, driving cost containment, and promoting patient-centered care models that prioritize individual preferences, needs, and outcomes (Palozzi and Ranalli, 2023).

The purpose of this theoretical review is to examine the role of entrepreneurial strategies in driving business model innovation within the healthcare industry. By synthesizing existing literature, case studies, and theoretical frameworks, this review aims to provide insights into the fundamental concepts, principles, and processes underlying business model innovation in healthcare. Specifically, it seeks to: Explore the dynamics of business model innovation in the context of the healthcare industry, including its drivers, challenges, and implications for stakeholders. Identify and analyze entrepreneurial strategies employed by organizations to innovate their business models and adapt to changing market conditions. Examine the theoretical foundations and practical applications of business model innovation, with a focus on value creation, revenue generation, and customer-centricity. Synthesize key insights, lessons learned, and best practices from real-world examples and case studies of successful business model innovation in healthcare. Discuss future directions for research, policy implications, and practical implications for healthcare practitioners, policymakers, and other stakeholders (Innvaer et al., 2002). By addressing these objectives, this theoretical review aims to contribute to a deeper understanding of how business model innovation can drive transformative change and improve the delivery, accessibility, and quality of healthcare services in the 21st century.

2. Understanding business model innovation

Business model innovation refers to the process of conceptualizing, designing, and implementing new approaches to creating, delivering, and capturing value within an organization (Wirtz and Daiser, 2017). Unlike product or service innovation, which focuses on developing new offerings, business model innovation involves reconfiguring the underlying logic, structure, and components of how a business operates. It encompasses a wide range of changes, including modifications to revenue streams, cost structures, distribution channels, customer relationships, and value propositions. Characteristics of business model innovation include, Business model innovation considers the entire value chain and ecosystem within which an organization operates, rather than focusing solely on individual products or services (Ibarra et al., 2018). It places a strong emphasis on creating and delivering value to customers, stakeholders, and society at large, often through innovative solutions that address unmet needs or pain points. Business model innovation enables organizations to adapt to changing market dynamics, technological advancements, regulatory requirements, and consumer preferences more effectively than traditional incremental improvements. In some cases, business model innovation can lead to disruptive changes that challenge existing industry norms, incumbents, and business models, opening up new market opportunities and redefining competitive landscapes (Bereznoy, 2019).

2.1. Importance in the Healthcare Sector

Business model innovation is particularly critical in the healthcare sector due to the unique challenges and opportunities it faces. The healthcare industry is characterized by complex regulatory frameworks, fragmented delivery systems, rising costs, and increasing demand for quality care (Ette et al., 2021). Traditional healthcare models often struggle to keep pace with these challenges, resulting in inefficiencies, disparities in access, and suboptimal outcomes for patients. Business model innovation enables organizations to identify and address unmet needs, such as gaps in care delivery, underserved populations, or inefficiencies in healthcare systems. By adopting innovative business models, healthcare organizations can prioritize patient needs, preferences, and outcomes, leading to improved patient satisfaction, engagement, and health outcomes. Business model innovation can help reduce barriers to access, improve affordability, and increase the efficiency of healthcare delivery, making healthcare services more accessible to diverse populations. Innovative business models can streamline operations, reduce costs, and improve resource allocation, leading to greater efficiency and sustainability for healthcare organizations (Elton and O'Riordan, 2016). Business model innovation encourages collaboration and integration among various stakeholders, including healthcare providers, payers, policymakers, and technology partners, leading to more coordinated and effective care delivery.

2.2. Types of Business Model Innovation

There are several types of business model innovation that can be applied in the healthcare sector, including; Service Innovation, introducing new services or service delivery models to meet evolving patient needs, such as telemedicine, home healthcare, or integrated care models (Clarke et al., 2017). Technology Innovation leveraging technology advancements, such as artificial intelligence, digital health platforms, or wearable devices, to improve healthcare delivery, diagnostics, and patient engagement. Financing Innovation, exploring alternative financing mechanisms, such as value-based pricing, subscription models, or risk-sharing arrangements, to align incentives and improve cost-effectiveness. Organizational Innovation, restructuring organizational processes, governance structures, or partnerships to enhance collaboration, agility, and innovation within healthcare organizations. Regulatory Innovation, advocating for regulatory reforms or policy changes to remove barriers to innovation, promote interoperability, and accelerate the adoption of innovative healthcare solutions. Understanding the different types and implications of business model innovation is essential for driving positive change and fostering innovation in the healthcare sector (Angeli and Jaiswal, 2016). By embracing innovative approaches to value creation, delivery, and capture, healthcare organizations can adapt to changing market dynamics, improve patient outcomes, and create sustainable competitive advantages in an increasingly complex and dynamic healthcare landscape.

2.3. Entrepreneurial strategies in healthcare

Identifying opportunities for innovation is a crucial aspect of entrepreneurial strategy in healthcare. This involves recognizing unmet needs, inefficiencies, and emerging trends within the industry, and envisioning new solutions to address them (Ratten, 2012). Opportunities for innovation in healthcare may arise from various sources, including, Monitoring market trends, demographic shifts, and changing consumer preferences can help entrepreneurs identify emerging opportunities for innovative products, services, or business models (Sima et al., 2020). For example, the rise of value-based care and personalized medicine has created opportunities for startups to develop targeted therapies and precision diagnostics. Keeping abreast of regulatory changes, policy reforms, and reimbursement trends can uncover opportunities to innovate within existing frameworks or advocate for regulatory reforms that promote innovation. For instance, the shift towards value-based reimbursement models has incentivized healthcare organizations to invest in population health management and care coordination solutions (Ehimuan et al., 2024). Leveraging advances in technology, such as artificial intelligence, blockchain, and telemedicine, can enable entrepreneurs to develop novel healthcare solutions that improve patient outcomes, streamline workflows, and enhance access to care (Adefemi et al., 2023). Engaging with patients, caregivers, and frontline healthcare providers can provide valuable insights into unmet needs, pain points, and opportunities for improvement within the healthcare system. By soliciting feedback and co-designing solutions with end-users, entrepreneurs can develop more user-centric and effective innovations.

Collaboration and partnerships are essential strategies for driving innovation and scaling solutions in the healthcare sector. Given the complexity and interdependence of stakeholders within the healthcare ecosystem, no single organization can address all challenges or seize all opportunities alone. Collaborative approaches enable entrepreneurs to leverage complementary expertise, resources, and networks to accelerate innovation and achieve greater impact. Key strategies for collaboration and partnerships in healthcare include: Forming strategic alliances with healthcare providers, payers, technology vendors, academic institutions, and other stakeholders can facilitate access to resources, expertise, and market opportunities. For example, startups may collaborate with academic medical centers to validate their technologies through clinical trials or pilot projects. Engaging with industry associations, incubators, accelerators, and innovation hubs can provide entrepreneurs with access to mentorship, funding, and networking opportunities. Participation in healthcare ecosystems allows entrepreneurs to connect with potential collaborators, investors, and customers, and stay abreast of industry trends and best practices. Involving end-users, such as patients, caregivers, and healthcare providers, in the co-creation process can ensure that innovations meet their needs and preferences (Adekanmbi et al., 2024). By engaging stakeholders early and iteratively throughout the design and development process, entrepreneurs can build more user-centric and commercially viable solutions. Embracing open innovation principles, such as crowdsourcing, hackathons, and collaborative platforms, can facilitate knowledge exchange, idea generation, and co-innovation with external partners (Leminen et al., 2018). By tapping into diverse perspectives and expertise, entrepreneurs can accelerate the pace of innovation and overcome internal biases and constraints.

Integration of technology is a key enabler of innovation in healthcare, allowing entrepreneurs to develop new solutions that improve access, efficiency, and quality of care (Adekanmbiet al., 2024). Technology integration involves leveraging digital tools, platforms, and data analytics to transform traditional healthcare processes, workflows, and business models. Developing digital health solutions, such as mobile apps, wearables, remote monitoring devices, and virtual care platforms, can enhance patient engagement, facilitate self-management, and enable remote delivery of healthcare services (Dozie et al., 2024). For example, telemedicine platforms allow patients to consult with healthcare providers

remotely, improving access to care and reducing barriers to treatment. Harnessing the power of data analytics, artificial intelligence, and machine learning can enable entrepreneurs to derive actionable insights from healthcare data, such as electronic health records, claims data, and wearables data. By analyzing large datasets and identifying patterns, entrepreneurs can improve clinical decision-making, optimize resource allocation, and predict and prevent adverse events (Chinyere et al., 2023). Ensuring interoperability and seamless integration of health IT systems, such as electronic health records, medical devices, and telemedicine platforms, is essential for enabling data exchange and continuity of care across different care settings and providers. Entrepreneurs can develop interoperable solutions that adhere to industry standards and interoperability frameworks, facilitating collaboration and information sharing among stakeholders. Exploring the potential applications of blockchain technology, such as secure data exchange, identity management, and supply chain tracking, can enable entrepreneurs to address challenges related to data security, privacy, and trust in healthcare. Blockchain-based solutions can enhance data integrity, transparency, and auditability, while also reducing administrative burden and fraud (Obijuru et al., 2024).

Adopting patient-centered approaches is essential for driving innovation and improving outcomes in healthcare. Patient-centered care places patients and their families at the center of the care delivery process, emphasizing their preferences, values, and goals. Entrepreneurs can develop patient-centered solutions that empower patients to take an active role in their healthcare journey, enhance communication and collaboration with healthcare providers, and improve overall patient experience. Key strategies for implementing patient-centered approaches in healthcare include, Engaging patients in shared decision-making processes, where they collaborate with healthcare providers to make informed choices about their care, can improve treatment adherence, satisfaction, and health outcomes (Odilibe et al., 2024). Entrepreneurs can develop decision support tools, such as decision aids and patient decision aids, that facilitate discussions and information exchange between patients and providers. Providing patients with access to educational resources, self-management tools, and support networks can empower them to make healthier choices, manage chronic conditions, and navigate the healthcare system more effectively. Entrepreneurs can develop digital health platforms, mobile apps, and online communities that deliver personalized education, coaching, and peer support to patients (Ogugua et al., 2024). Ensuring seamless care coordination and continuity across different care settings, providers, and disciplines is essential for delivering patient-centered care. Entrepreneurs can develop care coordination platforms, interoperable health IT systems, and patient portals that enable information sharing, care planning, and communication among multidisciplinary care teams and patients. Soliciting feedback from patients and caregivers, and using it to drive continuous improvement and innovation, is essential for delivering patient-centered care. Entrepreneurs can leverage patient feedback mechanisms, such as surveys, focus groups, and patient advisory councils, to identify areas for improvement, prioritize initiatives, and measure outcomes. Entrepreneurial strategies play a critical role in driving innovation and transformation in the healthcare industry. By identifying opportunities, fostering collaboration, integrating technology, and adopting patient-centered approaches, entrepreneurs can develop and scale innovative solutions that improve access, quality, and affordability of healthcare services, ultimately leading to better health outcomes and experiences for patients and providers alike (Anyanwu et al., 2024).

3. Theoretical framework for business model innovation

Value proposition design is a critical component of business model innovation, as it defines the unique value that a product or service offers to customers and stakeholders (Baldassarre et al., 2017). A strong value proposition articulates the benefits, features, and differentiation of a product or service, addressing the needs, pain points, and aspirations of target customers. Understanding the needs, preferences, and pain points of target customers is essential for designing a compelling value proposition. Entrepreneurs must conduct market research, customer interviews, and user testing to identify unmet needs and opportunities for differentiation (Cooper and Vlaskovits, 2013). Defining a clear and differentiated value proposition that sets the product or service apart from competitors is crucial for attracting and retaining customers. Entrepreneurs should articulate the unique benefits, features, and advantages of their offering, emphasizing how it addresses customer needs and solves their problems better than existing alternatives. Identifying the mechanisms through which value is created and delivered to customers is essential for designing an effective value proposition. Entrepreneurs should consider the underlying value drivers, such as cost savings, convenience, quality, innovation, and emotional appeal, and align their value proposition accordingly. Communicating the value proposition effectively to target customers through marketing, branding, and messaging is essential for driving customer awareness, interest, and engagement. Entrepreneurs should develop clear and compelling messaging that resonates with target customers and communicates the benefits and value of the product or service in a concise and persuasive manner (Diller et al., 2005).

3.1. Revenue Model Development

Revenue model development involves designing the mechanisms through which a business generates revenue and captures value from its products or services (Zott and Amit, 2010). A well-designed revenue model aligns with the value proposition, target market, and business objectives, while also ensuring profitability and sustainability. Developing a pricing strategy that reflects the value proposition, competitive landscape, and customer willingness to pay is essential for revenue model development. Entrepreneurs should consider factors such as cost structure, pricing tiers, volume discounts, and value-based pricing to optimize revenue generation and profitability (Lopez, 2020). Identifying and diversifying revenue streams beyond traditional product sales can enhance revenue resilience and profitability. Entrepreneurs should explore alternative revenue sources, such as subscription models, licensing fees, advertising, affiliate marketing, and ancillary services, that align with the needs and preferences of target customers. Determining the timing and mechanisms through which revenue is generated, such as one-time sales, recurring subscriptions, transaction fees, or usage-based pricing, is essential for revenue model development. Entrepreneurs should align monetization strategies with customer value drivers, adoption patterns, and industry norms to maximize revenue potential and customer satisfaction. Forecasting revenue projections and monitoring key performance indicators, such as customer acquisition costs, lifetime value, and churn rates, is essential for revenue model optimization (Gupta et al., 2006). Entrepreneurs should continuously evaluate and refine their revenue model based on market feedback, competitive dynamics, and business performance to maximize revenue growth and profitability over time.

3.2. Infrastructure Optimization

Infrastructure optimization involves designing and managing the organizational, technological, and operational components of a business to support its value proposition, revenue model, and growth objectives (Weill and Vitale, 2002). By optimizing infrastructure, entrepreneurs can enhance efficiency, scalability, and agility, while also reducing costs and risks. Designing an organizational structure that supports the execution of the business model and fosters collaboration, innovation, and accountability is essential for infrastructure optimization. Entrepreneurs should define clear roles, responsibilities, and reporting lines, and foster a culture of continuous learning, adaptability, and empowerment. Leveraging technology infrastructure, such as cloud computing, data analytics, and automation, can streamline operations, enhance scalability, and enable innovation (Attaran, 2017). Entrepreneurs should invest in scalable and flexible technology solutions that align with their business model and growth trajectory, while also prioritizing data security, privacy, and compliance. Optimizing operational processes, such as supply chain management, manufacturing, logistics, and customer support, is essential for delivering value to customers efficiently and effectively. Entrepreneurs should identify bottlenecks, inefficiencies, and opportunities for automation, standardization, and optimization, and implement continuous improvement initiatives to enhance operational excellence. Allocating resources, such as capital, talent, and time, effectively and efficiently is essential for infrastructure optimization (Long et al., 2016). Entrepreneurs should prioritize investments that support the execution of their business model and growth objectives, while also balancing short-term needs with long-term sustainability and resilience.

3.3. Customer Segmentation and Targeting

Customer segmentation and targeting involve identifying and prioritizing specific customer segments that are most likely to benefit from and value the product or service (Weinstein, 2013). By understanding the distinct needs, preferences, and behaviors of different customer segments, entrepreneurs can tailor their value proposition, marketing messages, and distribution channels to effectively reach and engage target customers. Segmenting the market based on demographic, psychographic, behavioral, and geographic criteria can help entrepreneurs identify distinct customer groups with unique needs and preferences (Weinstein, 2013). Entrepreneurs should conduct market research, customer surveys, and segmentation analysis to identify relevant segments and prioritize target segments based on size, growth potential, and strategic fit. Developing detailed customer personas, or fictional representations of target customers, can provide entrepreneurs with deeper insights into their needs, motivations, goals, and pain points (Revella, 2015). Entrepreneurs should create personas based on qualitative and quantitative data, such as interviews, surveys, and market research, and use them to inform product development, marketing strategies, and customer interactions. Developing targeting strategies that prioritize specific customer segments and allocate resources effectively to reach and engage them is essential for customer segmentation and targeting (Zeitham et al., 2001). Entrepreneurs should identify key customer segments, define targeting criteria, such as demographics, interests, and purchase behavior, and select appropriate marketing channels, messages, and tactics to reach and convert target customers. Building and nurturing relationships with customers over time is essential for maximizing customer lifetime value and fostering loyalty and advocacy. Entrepreneurs should invest in customer relationship management systems, loyalty programs, and personalized communication strategies to deepen engagement, solicit feedback, and address

customer needs and concerns. A theoretical framework for business model innovation encompasses value proposition design, revenue model development, infrastructure optimization, and customer segmentation and targeting (Pynnönen et al., 2012). By systematically addressing these key components, entrepreneurs can develop and execute innovative business models that create and capture value, drive sustainable growth, and deliver superior customer experiences in the dynamic and competitive landscape of healthcare.

4. Case studies and examples

Teladoc Health is a telehealth company that provides virtual healthcare services, including remote consultations with physicians, mental health counseling, and chronic care management (Akunne et al., 2021). By leveraging technology to connect patients with healthcare providers remotely, Teladoc Health has transformed the way healthcare is accessed and delivered, improving convenience, accessibility, and affordability for patients while also reducing healthcare costs and improving clinical outcomes.

One Medical is a membership-based primary care practice that offers personalized, technology-enabled healthcare services. With a focus on patient-centered care, seamless digital experience, and proactive health management, One Medical has disrupted the traditional primary care model by providing convenient access to high-quality care, same-day appointments, and virtual consultations (King et al., 2020). By integrating technology, data analytics, and personalized care plans, One Medical has achieved high patient satisfaction and retention rates while also reducing healthcare costs and improving health outcomes.

23andMe is a direct-to-consumer genetic testing company that offers personalized DNA testing kits for ancestry and health insights. By empowering consumers to access and understand their genetic information, 23andMe has democratized access to genetic testing and personalized medicine, enabling individuals to make informed decisions about their health, lifestyle, and family history. With over 10 million customers worldwide, 23andMe has contributed to advancements in genetic research, drug discovery, and disease prevention (Garner and Kim, 2018).

4.1. Challenges and Lessons Learned

One of the primary challenges faced by innovative healthcare startups is navigating complex regulatory frameworks and ensuring compliance with healthcare regulations, privacy laws, and quality standards. Successful business model innovations in healthcare require a deep understanding of regulatory requirements, proactive engagement with regulatory agencies, and a commitment to upholding patient safety and privacy (Ette et al., 2021). Another challenge is aligning innovative business models with existing reimbursement models and payment mechanisms in healthcare. Many innovative healthcare solutions, such as telemedicine, remote monitoring, and digital therapeutics, face reimbursement challenges due to outdated reimbursement policies, fee-for-service models, and value assessment criteria. Successful business model innovations require advocating for reimbursement reforms, demonstrating value and cost-effectiveness, and collaborating with payers and policymakers to align incentives. Integrating innovative healthcare solutions with existing healthcare systems, workflows, and technologies can be challenging due to interoperability issues, data silos, and legacy infrastructure. Successful business model innovations require seamless integration with electronic health records, clinical decision support systems, and other health IT systems, as well as collaboration with healthcare providers, payers, and technology vendors to ensure interoperability and usability (Trout et al., 2016).

4.2. Impact on the Industry and Stakeholders

Successful business model innovations in healthcare have led to improved access to care, particularly for underserved populations and rural communities. By leveraging technology, telemedicine, and remote monitoring, innovative healthcare startups have expanded access to healthcare services, reduced barriers to care, and improved healthcare outcomes for patients. Innovative business models in healthcare have prioritized patient-centered care, convenience, and personalization, leading to enhanced patient experiences and satisfaction. By offering seamless digital experiences, same-day appointments, and proactive health management, innovative healthcare startups have improved patient engagement, retention, and loyalty. Successful business model innovations in healthcare have focused on driving cost containment, efficiency, and value-based care. By adopting value-based payment models, population health management strategies, and preventive care initiatives, innovative healthcare startups have reduced healthcare costs, improved care coordination, and optimized resource utilization, leading to better health outcomes and lower total cost of care. Successful business model innovations in healthcare have the potential to transform the industry, improve patient outcomes, and create value for stakeholders (Ogugua et al., 2024). By addressing regulatory challenges, aligning with reimbursement models, and integrating with existing systems, innovative healthcare startups can overcome

barriers to adoption and scale their impact, ultimately driving positive change and innovation in the healthcare ecosystem (Anyanwu et al., 2024).

4.3. Future directions and implications

Advances in genomics, precision medicine, and digital health are driving the adoption of personalized medicine approaches. Healthcare entrepreneurs are leveraging genetic testing, biomarker analysis, and predictive analytics to tailor treatments and interventions to individual patient characteristics, leading to improved outcomes and reduced adverse events. Artificial intelligence (AI) and machine learning (ML) are revolutionizing healthcare by enabling predictive analytics, diagnostic imaging, and clinical decision support (Adefemi et al., 2023). Healthcare entrepreneurs are developing AI-powered tools and algorithms to analyze large datasets, identify patterns, and optimize treatment pathways, leading to more accurate diagnoses, personalized treatments, and cost-effective care delivery (Olorunsogo et al., 2024). The COVID-19 pandemic has accelerated the adoption of digital health and telemedicine solutions, paving the way for virtual care delivery, remote monitoring, and telehealth consultations. Healthcare entrepreneurs are developing innovative digital health platforms, mobile apps, and wearable devices to enhance patient engagement, improve access to care, and enable remote monitoring of chronic conditions (Ette et al., 2021).

Further research is needed to evaluate the effectiveness and scalability of value-based care models, such as accountable care organizations (ACOs), bundled payments, and shared savings arrangements. Studies examining the impact of value-based care on healthcare outcomes, cost containment, and patient satisfaction can provide valuable insights for policymakers, payers, and healthcare organizations. Research on healthcare innovation ecosystems, including incubators, accelerators, and innovation hubs, can shed light on the factors that facilitate or hinder entrepreneurship and innovation in healthcare. Understanding the role of ecosystem stakeholders, such as investors, mentors, and industry partners, can inform strategies for fostering collaboration, knowledge exchange, and ecosystem growth. Further research is needed to evaluate the impact of regulatory frameworks and policy reforms on healthcare entrepreneurship and innovation. Studies examining the effects of regulatory barriers, reimbursement policies, and licensure requirements on startup formation, investment, and market entry can inform policy recommendations to support innovation and entrepreneurship in healthcare.

Policymakers can establish regulatory sandboxes or innovation hubs to provide a safe and flexible environment for testing and scaling innovative healthcare solutions (Omaghomi et al., 2024). Regulatory sandboxes allow startups to experiment with new business models, technologies, and care delivery models under regulatory supervision, fostering innovation while ensuring patient safety and quality of care. Policymakers should consider reforms to reimbursement models and payment mechanisms to incentivize value-based care, preventive interventions, and innovative healthcare solutions (Ehimuan et al., 2024). Aligning reimbursement with quality outcomes, patient satisfaction, and cost containment can encourage healthcare organizations to invest in innovation and adopt more efficient and effective care delivery models. Policymakers should prioritize efforts to promote interoperability and data sharing across healthcare systems, providers, and technology platforms. Establishing interoperability standards, data exchange protocols, and privacy frameworks can facilitate seamless integration of digital health solutions, improve care coordination, and enhance patient outcomes while protecting patient privacy and security (Ogugua et al., 2024).

5. Conclusion

Business model innovation plays a crucial role in driving transformative change and improving healthcare delivery, access, and affordability. By focusing on value proposition design, revenue model development, infrastructure optimization, and customer segmentation, healthcare entrepreneurs can develop and scale innovative solutions that address unmet needs, improve patient outcomes, and create sustainable value for stakeholders. The findings of this review have several implications for healthcare practitioners, policymakers, and other stakeholders. Healthcare practitioners can leverage business model innovation to enhance patient-centered care, optimize workflows, and improve operational efficiency. Policymakers can support entrepreneurship and innovation in healthcare by fostering regulatory flexibility, promoting reimbursement reform, and investing in healthcare innovation ecosystems. To foster business model innovation in healthcare, stakeholders must collaborate to address regulatory barriers, align incentives, and promote a culture of innovation and entrepreneurship. By working together to overcome challenges and capitalize on emerging opportunities, we can drive positive change and create a more efficient, accessible, and patient-centered healthcare system for the future.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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