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Value Management use in Healthcare: A Comprehensive Literature Review (2015-2025)

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ABSTRACT: The application of value management in healthcare is thoroughly reviewed in this thesis, with a particular emphasis on the implementation of value-based healthcare (VBHC) from 2015 to 2025. It looks at how VBHC aims to restructure health systems so that patient outcomes are maximized in relation to costs, moving away from volume-driven treatment and toward patient-centered value creation. Value should direct all healthcare delivery decisions and system reform initiatives, according to the core tenet of VBHC. The paper summarizes the conceptual underpinnings of VBHC, including bundled payment models, integrated practice units, time-driven activity-based costing approaches, outcome assessment frameworks, and changing definitions of value. It looks at adoption trends in high-, middle-, and low-income nations worldwide, emphasizing the relative scarcity of studies and the geographic concentration of data in the US and Europe (65% of studies).

INTRODUCTION

Health systems all over the world are facing problems such as rising costs, older people with complicated needs, not enough workers, and health differences. **(Douglas et al., 2025; Van Staalduinen et al., 2022)**

By 2025, the United States is expected to spend $5.6 trillion on health care, which is about 19.6% of the gross domestic product. About 25% of this spending is wasted because of poor care, coordination, too much treatment, and complicated paperwork **(Johnson & Patel, 2024)**. Because of these problems, how health care is given and how value is understood and measured are changing Value-Based Healthcare (VBHC) has become a main way to reorganize health systems around the world.

The main idea is that when redesigning health care, the most crucial factor should be providing value to patients **(Porter, 2010; Teisberg et al., 2020)**. In 2006, Elizabeth Teisberg and Michael Porter presented VBHC. According to VBHC, value is the health outcomes attained for every dollar spent. This shifts the emphasis from merely doing more to offering value-based care **(Porter & Teisberg, 2006)**. This way of thinking aligns with the Triple Aim of the Institute for Healthcare Improvement, which aims to reduce costs, enhance population health, and improve patient experience. Later on, this was broadened to the Quintuple Aim to include enhancing health equity and healthcare providers' experiences **(Berwick et al., 2008; Johnson & Patel, 2024)**.

Although VBHC is becoming more popular and used globally, its application is still inconsistent. In various health care contexts, there are significant variations in its comprehension, application, and outcomes **(Khalil & Kynoch, 2021; Van Elten et al., 2023)**. According to **Møberg (2025),** VBHC's disparate financial and strategic objectives can make it difficult to appreciate its worth and erode the real sense of what it is **(Møberg & Malmmose, 2025)**. The number of studies on VBHC has increased significantly over the past ten years, with more than half of them being published between 2020 and 2023. This implies that it is still evolving and that there is increased interest in it **(Van Elten et al., 2023)**.

This review of the literature examines the evidence that value management is being implemented in the healthcare industry between 2015 and 2025. It examines important components, outcomes, issues, and potential future developments. This review provides a critical evaluation of VBHC's concepts, its application, and its potential to transform healthcare into a more patient-centered, equitable, and sustainable system by examining peer-reviewed research.

CONCEPTUAL FOUNDATIONS OF VALUE MANAGEMENT HEALTHCARE

Defining Value in Healthcare

The definition of value in healthcare has been transformed greatly compared to the original definition made by ***Porter (2010)*** clearly had put it that value in healthcare would be defined as a health outcome per dollar expended, where value should not be just an abstract ideal or code word of cost reduction, but a performance improvement framework. This misleadingly straightforward formula Value =Outcomes/Cost has far reaching consequences on the measurement of success in healthcare systems and the allocation of resources **(Porter, 2010)**.

The concept analysis conducted by Kehyayan et al ***(2025)*** with the help of Walker and Avant framework to develop the awareness of VBHC in a clearer manner. The analysis showed that value-based care and value-based healthcare are interchangeably used in the literature with no differences in characteristics, which describe effectiveness and efficiency of healthcare wherein patients want quality care and positive experiences whereas the provider wants the least cost without reducing expectations **(Kehyayan et al., 2025)**.

Three fundamental attributes of VBHC were identified in the study that include patient-centered care (PCC), patient experience, and cost-effectiveness. Patient experience is essential in compliance with medical treatments, decreased anxiety, and general attitudes towards care quality, and the integration of patient-reported experience measures (PREMs) with conventional clinical outcomes enables the consideration of various healthcare interventions in their entirety **(Kehyayan et al., 2025)**

Nonetheless, ***van Staalduinen & van der Nat (2025)*** point out that numerous researches work neither define nor describe their views on VBHC **(Staalduinen & Nat, 2025)**. The term has had many different interpretations and applications in literature since ***Porter and Teisberg*** never developed VBHC past its fundamental principles. This theoretical vagueness brings problems to the level of comparison of research and to the effectiveness of VBHC as a composite approach to individual parts **(Porter & Teisberg, 2006)**. According to the scoping review by ***Fernandez-Salido et al. (2024),*** absence of coherent conceptualization of VBHC is a serious obstacle to its systematic application and assessment to healthcare systems **(Fernández Salido et al., 2024)**.

Theoretical Development and extensions.

There were originally six components of the strategic agenda of value transformation including organizing into Integrated Practice Unit (IPUs), quantifying the outcome and costs relative to each patient, transitioning to bundled payments to care cycles, uniting care delivery systems, expanding geographical coverage, and creating an enabling information technology platform **(Porter & Teisberg, 2006)**. Nevertheless, this initial model can be assessed critically as being incomplete **(Van der Nat et al., 2020)**

According to ***Van der Nat et al. (2020)***, the model proposed by ***Porter and Teisberg*** was very focused on the measurements of the outcomes but did not explain how these measurements could be utilized to promote quality of care in the reality. Also, the initial statement failed to take into account that the actual change of the volume to patient value demands deep alteration of the culture and working procedures of the healthcare providers. The authors suggest adding four more components to the strategic agenda in order to make VBHC a reality: (1) development of a culture of value delivery, (2) establishing outcome-based learning environments, (3) developing quality improvement based on outcomes, and (4) establishing platforms where professionals can learn and be inspired by each other **(Porter & Teisberg, 2006; Van der Nat et al., 2020)**.

Gaspary et al. (2024) also build on conceptualization of VBHC by focusing on the incorporation of intangible assets besides patient perceptions. Their study points out that in the past, healthcare management has been more inclined to physical measures of performance evaluation yet current knowledge indicates that there has been a significant change in placing more importance on intangible resources of performance evaluation which includes organization culture, intellectual capital and patient satisfaction in generating healthcare value. This view places VBHC in the same perspective with wider World Health. Having a definition of health focused on physical, mental, and social health, instead of the absence of disease, as it is defined by organizations **(Gaspary et al., 2024)**.

Components of Value Equation: Results and Expenditure.

The numerator of the value equation, which is the outcomes, is a multidimensional construct that contains the most important things to patients. According to Porter, there are three levels of outcome, namely: (1) health status reached or maintained, (2) recovery process, and (3) health sustainability **(Porter, 2010) (Teisberg et al., 2020)**. In this respect, the health outcomes may be said to be based on the concepts of capability, comfort, and calm the possibility of patients to perform those sorts of things that make them individuals, their comfort during treatment and recovery, or their calm knowing that they are getting the proper and coordinated care **(Teisberg et al., 2020)**

More importantly, measures of outcomes are not applied to single services or intervention but to entire cycle of care. As Porter pointed out in his ASCO speech in 2008, we cannot know the value of a hospital or even a single oncologist; we must examine the general state of the patient. Values of this condition can only be measured **(Porter, 2008).** This means the sum of all costs of all interventions offered throughout a whole cycle of care must be aggregated and then compared to outcomes realized-the magic data required to know value. Costs as the denominator poses no less complex measurement problems. The real costs of providing care to the patient are poorly known in most healthcare systems and the conventional accounting approaches cannot reflect the reality of the resources being consumed in creating the value **(Kaplan & Witkowski, 2014)**

DECIDING ON THE VALUE-BASED HEALTHCARE TO BE IMPLEMENTED GLOBALLY.

Geographic Distribution and Adoption Patterns.

The studies of VBHC implementation show that there are considerable differences in geography. ***Khalil et al. (2021)*** implemented a scoping review of literature that identified 145 studies on VBHC implementation in different healthcare settings. Their results show that the United States has been leading in VBHC research with 65 percent of the research, which is preceded by the European countries. The main types of studies that were used were cohort and cross-sectional studies that were conducted on different populations such as hospitals, surgical patients and cancer patients **(Khalil & Kynoch, 2021)**. Likewise, ***Douglas et al. (2025)*** in their international scoping review discovered that the majority of the VBHC initiatives adopted were in high-income nations, and comparative lack of literature existed in the lower-middle-income nations **(Douglas et al., 2025)**.

In their scoping review, ***Van Elten et al. (2023)*** found that evidence on performance management of VBHC initiatives is mainly European and American, with the overrepresentation of Europe and North America being widespread in VBHC literature. The eleven articles incorporated all articles on VBHC and performance management systems who have studied hospital setting and have a relatively recent date of study (after 2015), although their search was not limited to a time period. The authors identified more than 50 percent rise in the number of papers published in 2020 and 2021, and it is possible to conclude that there is a growing interest in VBHC performance management **(Van Elten et al., 2023)**.

Implementation Approaches and Models

Application of translation of VBHC principles in practice has been experienced in different healthcare systems in a variety of ways. ***Khalil et al.(2021)*** found those models of funding that were most commonly reported were Value-Based Purchasing and Time-Driven Activity-Based Costing models, whereas traditional in-hospital care was the common model of delivery, but telemedicine showed an increasing interest. Their extensive review of the scope of scanning showed that they achieved positive results such as enhanced collaboration between professionals, enhanced follow-up of patients and improved outcome measurement but pointed out that there is still more research to be done to fill the gaps in implementation and scaling **(Khalil & Kynoch, 2021)**.

In their scoping review, ***Van Staalduinen et al. (2022)*** discovered the adoption of VBHC was focused on either health outcome or costs but not on both as recommended by value equation. Such a partial implementation can be connected with more general

health system and social realities. The implementation may create tensions between the conventional business models, which implies that the providers need to analyze the compatibility of these strategies to their own internal environment first. The authors conclude that implementation of single provider organization is difficult to say the least, and that successful VBHC transformation appears to demand systematic and systemic implementation in which all stakeholder must share determine the aim and extent of transformation and then guide their own actions and choices in line with their goals **(Van Staalduinen et al., 2022)**.

The fragmented nature of the VBHC implementation can also be supported by the fact that van ***Elten et al. (2023)*** found out that seemingly, hospitals do not consider VBHC as an integrative management strategy. Most studies show that most hospitals only apply one or two VBHC components with the most common ones being measure outcomes and costs for every patient and organization of care into IPUs. Along with sharp rise in number of studies in recent years these findings suggest that VBHC risks becoming management fad where by hospitals choose component that best fits their existing management strategies which in turn creates fragmentation of VBHC and makes it a difficult task to study its effectiveness as overall strategy **(Van Elten et al., 2023)**.

Healthcare Environment and Specialties.

The VBHC applications cut across many clinical areas. The scoping review of time-driven activity-based costing in otolaryngology identified nine articles where subspecialties were as follows: pediatric otolaryngology (N=4), head and neck surgery (N=3), and rhinology (N=2). The following were the primary study objectives that were expected to achieve: waste reduction, measurement of cost, the effect of new interventions in use and quality improvement opportunities. The majority of articles employed input of the involved personnel and/or direct observation to draw process maps and examined institutional and/or public recordings to gain cost data with TDABC being mostly utilized to research outpatient clinics or surgeries **(Quraishi et al., 2025)**.

The value-based healthcare address by Porter to ASCO specifically aimed at oncology and stated that organizations adopting such agendas are performing well in most areas of medicine and most regions of the globe **(Porter, 2008).** The focus of the agenda included organizing care by medical condition, measuring care outcomes and expenses per patient, transition to bundled payments, construction of integrated practice unit, geographic expansion, and enabling IT infrastructure. The general principle was that the ultimate cause of cost reduction was better outcomes but we do not know what outcomes are in 99.9% of situations so continuous measurement is necessary and not just artificial conditions of clinical trials.

CORE ELEMENTS OF VALUE-BASED HEALTHCARE.

Outcome Measurement

Outcome measure standardization is an essential VBHC groundwork. ***Porter, Larsson, and Lee (2016)*** claimed the potential of value-based healthcare to drive the improvement by accelerating the outcomes measurement: to ensure measuring the minimum of set outcomes of any major medical condition, one must commit to the outcome's measurement. The authors have pointed out that existing healthcare systems need to shift the focus of counting compliance with processes to counting what really counts to patient's actual health outcomes obtained **(Michael E. Porter et al., 2016)**.

Value measurement has taken a new focus on patient-reported outcome measures (PROMs). ***Weldring and Smith (2013)*** understand the definition of PROs as any report of the status of the health condition or health behavior of the patient, without any interpretation by clinician or anyone. The instruments that are used to measure the PROs are called PROMs, and they evaluate several health-relevant concepts that are especially important in measurement of quality and performance: health-related quality of life, functional status, symptoms and symptom burden, health behaviors, and healthcare experience of the patient. The Patient-Reported Outcomes Measurement Information System (PROMIS(r)) is a system developed by National Institutes of Health and offers a wide variety of measures and translations (more than 300) in different languages **(Weldring & Smith, 2013)**

Nevertheless, PROMs have serious problems with their implementation in the clinical practice. ***Kidanemariam et al. (2024)*** examined the application of PROMs in VBHC care pathway in patients with vestibular schwannoma and did not have any significant differences in observed or patient-reported patient-centeredness in these patients before versus after the implementation of PROMs. Although it is evident that more discussion of patient-reported outcomes was done, most patients did not anticipate that they would discuss PRO in consultations. The authors conclude that a physician needs to consider the

addition of PROMs to the discourse with the patient rather than believing that it can be beneficial automatically **(Kidanemariam et al., 2024)**.

Liu, Rothrock, and Edelen (2024) offer a guide to the appropriate choice of PROMs depending upon which information we have been measuring and whom we are asking questions, classifying PROMs into four groups: (1) condition specific and domain-specific, (2) condition-specific and global, (3) universal and global, and (4) universal and domain-specific. As there are thousands of different types of PROMs, and the science of psychometrics is becoming a broader application, the process of search and selection of which to put into practice must carefully consider the measurement properties and clinical relevance, as well as practical abilities to put them into practice. There is contradictory evidence on the use of PROMs to enhance patient-related outcomes. In a systematic review (2024) of 76 studies, researchers found that at individual level, 43% of 23 studies providing patients or healthcare provider with feedback of PROMs had an improved outcome. This percentage was elevated to 68% in the situation when PROMs were applied to track the symptoms of the disease related to care-pathways, the implication being that the mechanism of using PROMs has a great influence on the effectiveness. Organizational level studies showed PROMs as being promising in quality improvement cycles, but not much of evidence has been found about optimal implementation strategies **(Liu et al., 2024)**.

Time-Driven Activity-Based Costing (TDABC)

Knowledge of real cost of healthcare delivery is a basic need of value based transformation. Conventional cost-accounting systems, whether top-down systems basing their methods on some predetermined measures such as relative value unit (RVUs) or bottom-up systems, do not represent actual resource use by patients passing through care systems **(Keel et al., 2017)**

Time-driven activity-based costing (TDABC) was created with the purpose of fulfilling these limitations. TDABC was originally developed in Harvard Business School and later modified to healthcare use-cases as a method to determine costs of resources used by patients as they undergo the process of care. The approach consists in the design of detailed process maps about care delivery cycle to patient encounter, the resources (people, equipment, supplies) that were used during each step, calculated perinate cost of each resource (capacity cost rate), and multiplied by the time requirement to obtain the total cost of an episode of care **(McLaughlin et al., 2014)**.

In their systematic review of TDABC in healthcare, *Keel et al. (2017)* stated that the approach is useful to cost processes efficiently and, therefore, address one of the main complexities of existing cost-accounting practices. Nevertheless, the capability of TDABC to enlighten bundle payment reimbursement systems and align delivery across care continuum is yet to be revealed in the published literature where the role of TDABC in the cost-accounting space is still evolving. The authors suggest that gradual integration of TDABC in functional systems should be done using current guidelines as a guide and expounding on them to be better placed to reflect cost of care delivery of the conditions **(Keel et al., 2017)**.

Shakya *et al. (2025)* performed systematic literature review analyzing the use of TDABC in health economic analysis on the continuum of care between the beginning of the database and April 2025. They discuss methodological benefits and test compliance with 7 or 8-step methodological reporting models. The paper highlights that VBHC is being increasingly demanded with the growing spending on healthcare in the world with TDABC being one of the major elements that can help solve the cost-related issues **(Shakya et al., 2025)**.

McLaughlin et al. (2018) identified the perspective of anesthesia providers on the use of TDABC and showed cost-savings and better wait times because of moving colonoscopies outside of the main hospital and into the ambulatory facility, front-weight costs of transcatheter aortic valve replacement, and the considerable cost savings due to the reorganization of staff to perform carpal tunnel release. The authors underline that the value-based healthcare platform focuses on TDABC as it offers framework to enhance the healthcare delivery process by identifying improvements **(McLaughlin et al., 2014)**.

Integrated Practice Unit (IPUs).

Structural Innovation at the core of VBHC Organization of care into Integrated Practice Unit. According to *Porter and* ***Teisberg (2006)***, IPU was defined as a dedicated team comprised of both the clinical and nonclinical staff, which offers complete patient care cycle regarding his or her condition. Multispecialty team in particular IPU treat, not only disease but all related conditions which are designed to work together to attain and compete as likely best outcome at lowest costs **(Porter & Teisberg, 2006)**.

The concept of the IPU is the ultimate opposition to the conventional organization of healthcare or medical specialties or departments. Organizing according to the medical conditions of the patient and not the specialty, as ***Teisberg et al. (2020)*** clarify, allows expertise and efficiency to reduce costs instead of rationing **(Teisberg et al., 2020)**.

The most recent studies have shown that evidence-based practice in turn necessitates clinical leadership promoted by Porter in the Swedish Sahlgrenska Hospital (one of the few hospitals where IPU implementation was scientifically assessed) along with a heavy emphasis on establishing safe environment and trust between the healthcare professionals **(Van Staalduinen et al., 2022)**.

Bundled Payment Models

Movement of fee-based models to bundled reimbursement models is a vital financial machinery in matching incentives to value delivery. In bundled payments, healthcare providers can be paid a single amount on the entire episode of care as opposed to being paid separately on each service, which provides a financial incentive to streamline care and yet maintain quality **(Porter, 2010; Teisberg et al., 2020)**.

Comprehensive is the most notable and the most researched model of mandatory bundled payment to date and is applied by Medicare. Care for Joint Replacement (CJR) program, which was implemented in April 2016 **(Finkelstein et al., 2018; Navathe et al., 2017)**.

In CJR hospitals in randomly chosen metropolitan statistical areas are responsible to spend on episode of care which covers index hospitalization and 90 days of post discharge. Hospitals are given bonuses or fined according to the Medicare expenses on hip-replacement or knee-replacement.

Finkelstein et al. (2018) compared first two years of CJR program on Medicare claims of 2015-2017; the sample included 280, 161 procedures in 803 hospitals in the treatment group and 377, 278 procedures in 962 hospitals in the control group. The researchers have discovered slight savings of Medicare expenditure without subsequent poor-quality results, which was mainly made up of the post-acute care usage decrease **(Finkelstein et al., 2018)**.

Kilaru et al. (2024) have studied the relationship between a compulsory entry into CJR and outcome disparities change in patients eligible to receive two benefits Medicaid and Medicare. Their retrospective observational study of 1,603,555 Medicare beneficiaries revealed that compulsory attendance was related to less disparity in complications of joint replacement among people with low incomes **(Kilaru et al., 2024)**.

Nonetheless, there are major challenges in the implementation of bundled payment. ***Sullivan et al. (2017)*** conducted a review of the existing bundled payment models in joint replacement and spine procedures and reported various perceived and proven difficulties such as possible incentives to withhold care. Although existing fee-for-service model might have incentive providers to use resources that maximize reimbursement, a bundled payment model might reduce resource use so as to contain costs with the risk that expensive diagnostics or interventions might be omitted to avoid financial penalty **(Sullivan et al., 2013)**.

Information Technology Infrastructure

One of the six aspects of strategic agenda of value change that was identified by **(Porter & Teisberg, 2006)**. is IT infrastructure that is required to combine data effectively to gauge the outcomes and appreciate costs. But, as ***Porter*** observed, IT systems are improving, and we are far away before we can have all that infrastructure to be in line with this model **(Porter, 2008)**.

There is a considerable technical and logistical challenge of integrating various sources of data. VCBHC necessitates the incorporation and the examination of electronic health record data, administrative data, patient-reported outcomes data collection system and cost-accounting data. Standardization of data between these disparate systems is complicated because of the variability of the EHR systems and reporting practices especially so in fragmented healthcare systems **(Miller, 2009)**.

Teymourifar (2025) considered the concept of contract mechanisms as an instrument of strategic plans in encouraging cost-effective and outcome-based technology integration in healthcare systems. The narrative review points out that technological innovations that are not based on the principles of value-based care can enhance the systemic problems instead of addressing them. Most healthcare systems have been dealing with inefficiencies over time due to overuse, underuse, misuse, and wastage in the adoption of health technology when there is no strategic implementation of the adoption in line with the principles of value **(Teymourifar, 2025)**.

It has been addresses the topic of the constantly increasing pace of transformation in the industries, and healthcare has become the crossroad of AI and robotics. As AI pilots are abundant in NHS and health systems around the globe, a small number of them led to sustained and system-wide transformation, as the problem at hand is not technological, but system-based. This is no longer a question of the ability to create sophisticated tools but rather what we can do to convert innovation into meaningful value to patients and health systems and this necessitates emphasis on leadership, teamwork and alignment of outcomes that are most important to the patient **(Ren Kon et al., 2026)**.

IMPLEMENTATION ISSUES AND OBSTACLES

Organizational and Cultural Resistances.

The cultural change is perhaps the most important yet underrated obstacle to the VBHC introduction. **(Van Staalduinen et al., 2022)** point out that the initial formulation by Porter and Teisberg failed to account that to shift to patient value, the fundamental culture and mode of working among healthcare professionals should change. Unless culture change is invested in at the same time as the technical implementation of VBHC, there is a chance of failure in whole value-based transformation.

In Danish healthcare setting, ***Moberg (2025***) discovered that VBHC guidelines at the regional level were mainly based on quality indicators, implying that it was strategic to focus on quality rather than finances since there were no cost guidelines. The research found out the convolutions embedded in the knowledge of integrating patient perspectives by public healthcare management. Scholars detected homogenized accentuated willingness on the part of managers to avoid the traditional emphasis on productivity that was linked to New Public Management, but the actual realization was not easy because of the entrenched organizational structures and practices **(Møberg & Malmmose, 2025)**.

The resistance of healthcare professionals toward change, in particular the ones used to fee-for-service models, is a major implementation challenge. It is also challenging to get healthcare providers to adopt the principles and practices of VBHC especially where there are systems that are deeply rooted in volume incentives **(Porter & Lee, 2013)**.

Van Elten et al. (2023) found that implementation strategies of VBHC were not described and were assessed not more than once in the literature. Such omission in addressing managerial considerations of the VBHC implementation implies that there is a wide disconnect between theory and practice in the context of transformation of healthcare organizations. The authors suggest that interdisciplinary cooperation in further studies on effectiveness of VBHC implementation should be used to address these issues in a holistic manner **(Van Elten et al., 2023)**.

Standardization and Measurement Problems of Data.

The complex technical and methodological issues to overcome when standardizing outcome measures in the various healthcare settings are complex. According to ***International Health Forum (2024),*** the variability of EHR systems and reporting practices complicates the process of ensuring that there is proper data collection in various healthcare settings. Some settings may have insufficient data collection infrastructure, and measurement may get more complicated, and selecting inappropriate metrics may have unintended effects, like concentrating on results that are easy to attain and leaving out preventive care or complex cases.

Porter, Larsson, and Lee (2016) recommend the use of sets of outcome measures created internationally using the efforts of collaborations such as International Consortium of Health Outcomes Measurement (ICHOM). The dream scenario views that healthcare providers across the world will quantify outcomes in a similar fashion that they can be compared on a global basis. Nevertheless, this standardization without being irrelevant to local conditions and patient groups is a major challenge that necessitates a long-standing cooperation on the international level **(Michael E Porter et al., 2016)**.

The choice of the right outcome measures must be a balance between being comprehensive and achievable. According to ***Liu, Rothrock, and Edelen (2024***), the abundance of PROMs and the growing popularity of science of psychometrics as a method of health measurement can be confusing when it comes to the selection of appropriate ones to implement. The issues that healthcare organizations should be aware of include what is measured, who questions are posed, measurement properties of instruments, clinical relevance, implementation feasibility, and the way that measures will be used to enhance care **(Liu et al., 2024)**.

There are also equally daunting challenges in measuring costs. According to ***Keel et al. (2017***), the capability of TDABC to instruct bundled payment reimbursement systems is yet to be sufficiently proven in literature. The approach has difficulty in

managing the cost of the support department and the delivery coordination in the continuum of care. Its implementation needs a big initial investment of people, technology, and training, and small and resource-strained healthcare providers may not be able to adapt to the principles of TDABC without some outside pressure or incentives **(Keel et al., 2017)**.

Financial Sustainability and Alignment of Payment Model.

One of the main concerns of healthcare providers is financial sustainability on the basis of value-based models. ***Khalil et al.*** established that transition to VBHC among healthcare systems is complicated due to the absence of standardized approaches to the measurement of outcomes and the financial sustainability. Although VBHC has potential to enhance efficiency and quality of health services, there are still difficulties in balancing financial structure and operational structure to support this paradigm change completely **(Khalil & Kynoch, 2021)**.

This transition risk is exceptionally acute in the case of providers who serve high-risk and complex groups of patients. The authors state that patients who are receiving joint replacement surgeries with comorbidities that are linked to an increased risk of complications might incur an extra cost per episode of care, followed by an increased length of stay and readmission **(Sullivan et al., 2013)**. This gives the possibility of cherry picking healthier patients and lemon dropping the sicker patients to evade financial punishment and this calls into serious questions of equity.

Startup capital needs are a hindrance especially to small providers. According to ***Healthcare Innovation Group (2020***), the providers need to invest in data platforms, analytics, and interoperability software or services, and related training to report on performance to payers and governments.

The changing approach of CMS to VBHC is indicative of these issues. In 2017, CMS consolidated number of mandatory geographic areas that take part in CJR to 34 areas and to all low-volume and rural hospitals participation became optional stating that to assure access to care has to reduce burden**.** Out of over 50 distinct value-based care models that CMMI has since then produced since 2010, only twelve models have generated statistically significant savings to the federal government in the long run, which illustrates a challenge in generating long-term financial health with value-based agreement **(Carroll et al., 2024)**

Equity and Access Concerns

In making sure that VBHC models will not worsen existing health disparities, it is a critical challenge that needs deliberate attention on equity. According to ***International Health Forum (2024***), equity aspects should be part of VBHC design and implementation to prevent some adverse outcomes that would be unintended. Risk adjustment procedures should be able to consider social determinants of health well enough and variation in patient risk factors to avoid systematic disadvantaging of providers to vulnerable populations **(Carroll et al., 2024)**.

Kilaru et al. (2024) offer some promising results that mandatory involvement in bundled payments can result in certain advantages of health equity provision because it will ensure that healthcare organizations in different geographic zones will be required to participate, which will potentially eliminate patient selection in the voluntary models and enhance the inclusion of historically marginalized groups. Their discovery of smaller differences in the complications of joint replacement between dual-eligible Medicare-Medicaid beneficiaries is an indication that compulsory strategies can have favorable equity effects **(Kilaru et al., 2024)**.

Nonetheless, there are still concerns about the possibility of VBHC decreasing the access of vulnerable groups. Part of the evidence suggests that racial minorities had lower access to surgery compared to hospitals involved in CJR. The mechanisms that explain such effects still have to be investigated more, whether they are the result of intentional selection of patients, disparity in geographical accessibility, or other systemic processes **(Kilaru et al., 2024)**.

According to ***Douglas et al. (2025),*** the largest amount of implemented VBHC initiatives was in high-income countries, and the number of studies in lower-middle-income countries was quite low. This geographic difference in practice and study brings up concerns of applicability and practicability of VBHC principles in resource-limited environments where healthcare obstacles may prove to be a completely different problem than those in high-income environments. The gap needs to be filled by creating implementation plans that are context-specific and researching the possibility of applying VBHC principles in different types of healthcare **(Douglas et al., 2025)**.

OUTCOMES AND EFFECTIVENESS EVIDENCE

Outcomes of Cost and Resources Utilization

The data on the effect of VBHC on the costs and use of resources has mixed outcomes but, on the whole, positive outcomes. In the assessment of the first two years of CJR, ***Finkelstein et al. (2018***) discovered that there were small Medicare savings with no negative impact on the quality results. The main mode of saving was a decrease in post-acute care use, where discharge to institutional post-acute care has declined and is accompanied by a corresponding transfer to home health services and outpatient rehabilitation **(Finkelstein et al., 2018)**.

In their scoping review, ***Khalil et al.*** found that the implementation of VBHC was linked to such positive results as enhanced collaboration between professionals, enhanced patient follow-up, and outcome measurement. The existing research shown that VBHC is capable of cost-saving and better clinical outcomes, which are not equally applicable in all settings. The non-standardized approaches to the measurement of financial sustainability make it difficult to assess the long-term effects of costs **(Khalil & Kynoch, 2021)**.

The initial outcome of bundled payment programs is encouraging. According to ***Sullivan et al. (2013***), prospective bundled payment program showed patient satisfaction of 97 percent at 22 percent reduced medical expenses in comparison with conventional fee-for-service models. Studies on the need to assess whether BPCI was related to more reduction in Medicare payments but not loss in quality if lower extremity joint replacement episodes found statistically significant savings, which indicated that bundled payments could effectively align incentives to reduce costs without loss in quality **(Sullivan et al., 2013)**.

But it is not clear whether or not cost saving can be sustained in the long term. According to ***United Health Group (2025),*** among the over 50 distinct models of value-based care, three of the pilots that took place since 2010, just twelve models yielded statistically significant cost reductions by 2024. This relatively poor success rate underscores the difficulty in developing payment models which will result in sustainable financial performance and sustain or expand quality and access.

Improvement in Quality and Patient Outcomes.

Quality improvement under VBHC is subtler than cost outcomes. According to ***Finkelstein et al. (2018),*** there were no significant quality outcomes on the CJR program in terms of 90-day mortality, readmissions, and emergency department visits. Nevertheless, the lack of harm is not always a sign of improvement, and more patient-centered outcome measures can be required to identify quality changes **(Finkelstein et al., 2018)**.

Kehyayan (2025) points out that VBHC is meant to enhance the quality of healthcare delivery and minimize expenditures, with the results of the utmost importance in the eyes of patients. It is found that patient experience is of important role to adherence to medical regimens, lower anxiety, and general perceptions of quality of care. The implementation of patient-reported experience measures (PREMs) and conventional clinical outcomes can be used to conduct a more comprehensive assessment of the healthcare intervention beyond mortality and morbidity **(Kehyayan et al., 2025)**.

The systematic review that explored PROM utilization to enhance patient outcomes revealed that 43% of the studies at the individual level reported an improvement when PROMs were fed back to the patient or the provider, and 68% of the studies at the individual level showed improvement when PROMs were used to track symptoms of the disease related to the **pathway (2024).**

The address **of** *Porter* **to** *ASCO (2015*) has underlined that the greatest potent single lever to reduce cost is enhancing results, although the consistent data on the outcomes are inaccessible regarding most clinical situations. The healthcare systems can do little to determine the best of practices or scale improvement without some systematized measurement of what matters to patients. The main problem is to shift out of process-based quality measures into the more real outcome measures based on patient priorities.

Provider Experience and Operational Outcomes.

The experience of providers and operational efficiency of VBHC constitute a significant but poorly studied field. The researchers shown by *McLaughlin et al. (2018)* have illustrated with the use of TDABC that the knowledge of granular costs allows recognizing particular process enhancement techniques, including moving procedures to suitable locations and

restructuring staffing arrangements to become more efficient. These operational changes are able to decrease provider frustration towards wasteful processes besides enhancing resource allocation.

In the Swedish Sahlgrenska Hospital implementation, *Van der Nat et al. (2022)* discovered that clinical leadership should be supported with a heavy emphasis on the establishment of a safe environment and confidence between a healthcare provider. Realizing the implementation involves culture in that professionals are able to be team players in the interest of the patient, will take risks to be vulnerable, will reflect freely, and will always improve. Such a culture shift can also promote professional satisfaction when properly adopted through the possibility of practicing collaboratively and in accordance with professional values **(Van Staalduinen et al., 2022)**.

Nevertheless, *Moberg (2025)* notes that the unwillingness of healthcare professionals to change, in particular, those who have been exposed to fee-for-service, is an important obstacle. The transition does not only involve new skills and competencies but also necessitates root reconceptualization of professional role in the care delivery system. In the absence of proper support to this transformation, the introduction of VBHC will lead to the provider becoming overburdened and forcing workforce issues **(Møberg & Malmmose, 2025)**.

As part of sustainable healthcare change, *United Health Group (2025)* reminds that the Quintuple Aim has incorporated the enhancement of provider experience as the core element of sustainable healthcare transformation. The issues of provider burnout and shortages may lead to an unstable state of the healthcare systems, and methods that would improve instead of depreciate the practice of professional experience are essential to the long-term prosperity. The research has little evidence on the impact of VBHC on provider wellbeing but presents a valuable future research area.

Patient Experience and Satisfaction.

Experience in the patient is one of the outcomes of interest and value creation mechanisms in VBHC framework. According to *Kehyayan (2025)*, patient experience is one of three main attributes of VBHC along with patient-centered care and cost-effectiveness. The level of patient satisfaction with the quality of care, waiting time, and experience positively influences treatment plan adherence, health behaviors and ultimately clinical outcomes **(Kehyayan et al., 2025)**. *Sullivan et al. (2013)* demonstrated that prospective bundled payment program had a 97% patient satisfaction, and therefore, their findings indicated that financial models that can balance the incentives of providers with patient outcomes can improve the patient experience **(Sullivan et al., 2013)**.

Combination of patient-reported experience measure (PREM) with patient-reported outcome measure. (PROMs) makes it possible to evaluate more thoroughly the quality of care through the lens of the patient. PREMs are views of patients concerning care processes; communication, coordination, responsiveness, that might not be directly influenced by clinical outcome measures but are highly valued by patients across the entire experience of care and beyond the content of the clinical outcome measures **(Kehyayan et al., 2025)**.

In the prospect of the study of vestibular schwannoma care pathway, *Kidane mariam et al. (2024)* discovered that no significant effect was found on the observed patient-centeredness or the majority of patients did not anticipate the discussion of the subject of PROM in the consultation. That emphasizes the fact that the implementation of outcome measurement tools without carefully thinking about how these tools can be woven into clinical workflows and patient-provider communication might not lead to patient experience improvement **(Kidanemariam et al., 2024)**.

VBHC RESEARCH, METHODOLOGICAL CONSIDERATIONS

Study Designs and Evaluation Approaches.

Studies assessing the use of VBHC use varying methodological assessments, which have different strengths and weaknesses. *Khalil et al.* discovered that cohort and cross-sectional research were predominant in the VBHC studies, which involved different populations such as hospitals, surgical and cancer patients. The scoping review approach enabled effective mapping of VBHC research space, but failed to evaluate the quality of the reviewed studies, which is a crucial drawback to evidence synthesis **(Khalil & Kynoch, 2021)**.

According to *Van Elten et al. (2023)*, implementation strategies of VBHC were not described and evaluated less often in the published literature. Majority of the included articles used the case study designs of single organization implementation, which

restricts the generalizability of their results. Lack of comparative effectiveness studies evaluating various implementation strategies is a major evidence gap in the evidence base **(Van Elten et al., 2023)**.

Finkelstein et al. (2018) used quasi-experimental difference-in-differences design that was based on random assignment of the metropolitan statistical areas to intervention and control groups in CJR program. The methodology offers a greater level of causal inference compared to the purely observational studies, but the possibility of spillover effects between treatment and control sites and development of parallel healthcare programs does make attributing the resulting effects of CJR specifically challenging **(Finkelstein et al., 2018)**.

The task of rigorous evaluation research in VBHC indicates the more general problems in research of healthcare services. Randomization of healthcare organizations or payment schemes is frequently not possible because of ethical, practicable or political reasons. The quasi-experimental designs provide trade-off but attention must be paid with the selection bias, temporal confounders and statistical assumptions.

The soundness and dependability of the VBHC measurement methodologies are the critical issues of the methodology. *Liu, Rothrock, and Edelen (2024)* offer guidelines to implement proper PROMs selection, which is most effective through measurement validity (instrument measures what it claims to measure) and reliability (consistency of the measurement over time and raters). Out of thousands of the available PROMs, it is necessary to take measurement properties into account to get meaningful outcomes assessment **(Liu et al., 2024)**.

Porter, Larsson and Lee (2016) promote minimum adequate outcome sets that are smallest sets of measures necessary to comprehend patient perspective outcomes. But to define the concept of minimum sufficient judgment, value is needed regarding what outcomes are of greatest concern, which may differ among patient groups, clinical scenarios, and cultural backgrounds. The dilemma of being comprehensive and feasible is still pending **(Michael E. Porter et al., 2016)**.

According to *Keel et al. (2017*), the accuracy of TDABC is dependent on the quality of process mapping, time estimates, and cost data in the calculations. The misconduct or prejudice in any of the parts trickle down the computations that may give wrong cost estimations. The process also faces difficulty in assigning the cost of the support department, as well as the capacity utilization variance, and this brings an element of uncertainty when comparing costs **(Keel et al., 2017)**.

International Health Forum (2024) points out that poor risk adjustment may have a systematic disadvantage to providers serving vulnerable members who have more complicated needs and poorer baseline health status. Figure out and confirm risk adjustment strategies that sufficiently control social determinants of health without causing poor care quality inadvertently is still a methodological challenge.

Limitations of Current Evidence Base

The existing VBHC evidence base has some important limitations that restrict certain conclusions on effectiveness. *Douglas et al. (2025*) **recognizes** that the majority of the VBHC programs introduced were in high-income nations, and there were relative gaps in research in low-middle-income nations. This geographic restriction poses the generalizability of the findings to a variety of healthcare settings with varied challenges and financial limitations **(Douglas et al., 2025)**.

Van Staalduinen et al. (2022) discovered that a large number of researches do not clearly or eloquently define or articulate their view on. VBHC, where adoption will be either health outcome or costs- not both as derived by value equation. This theoretical grayness makes it difficult to synthesize evidence across studies which allegedly look at same phenomenon. Case studies were mostly single organizations, which restrict the generalizability **(Van Elten et al., 2023)**. Although case studies are very descriptive in the context of the implementation processes, they are low in terms of providing causal inference or what aspects of implementation make it or break it. Publication bias is another area of concern because successful implementation may tend to be published more than failed attempts. Literature can thus give an unrealistic illusion of the viability and efficiency of VBHC.

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SECTOR-SPECIFIC APPLICATIONS AND INNOVATIONS

Surgical and Procedural Specialties.

The surgical specialties have been the most prolific in taking up VBHC where the episodes of care have made it easy to measure outcomes and cost. The application of TDABC was predominantly in outpatient clinics and surgery in a study in the otolaryngology field showing that the subspecialties were: pediatric otolaryngology, head and neck surgery, and rhinology. Reduction of waste and quantification of costs were the primary study objectives as well as assessment of the new intervention effects and quality improvement opportunities **(Quraishi et al., 2025)**.

Orthopedic surgery, especially joint replacement, is one of the most researched areas of surgical use of VBHC principles. The hip and knee replacement program of CJR offers natural experiments to assess the level of impact of bundles payments. In a study by ***Finkelstein et al. (2018***), significant spending cuts were due mainly to fewer institutional use of post-acute care and was replaced by home health services. This condition is especially susceptible to VBHC practices as the episodes of joint replacement are clearly delimited: surgical intervention is the obvious start of the episode, and the recovery pattern is the usual one, and the functional outcomes can be measured **(Finkelstein et al., 2018)**.

According to ***Sullivan et al. (2013),*** the review of bundled payment models that address joint replacement and spine surgeries suggest that such models demonstrate a potential cost reduction without the loss of quality, yet a few challenges can be highlighted. The possibility of motivating withholding care, extra expenses to the patients with comorbidities related to complications, and risk of selecting patients all should be closely observed and properly protected **(Sullivan et al., 2013)**.

Nonetheless, the issue of equity implication in surgical VBHC implementation should be considered. ***Kilaru et al. (2024***) discovered that although the mandatory CJR involvement was linked with a decrease in inequality in complications among dual eligible patients, there is some evidence that access to surgery among racial minorities in the hospitals who participated in the program may have been reduced. Such results demonstrate a necessity of clear equity in the development and evaluation of surgical VBHC programs **(Kilaru et al., 2024)**.

Cancer Care

The oncological field is a rather complicated sphere of clinical facilities in which the VBHC principles have specific problems but have great chances of value. In ***2008, Porter*** gave an address to ASCO which included an agenda of value-based healthcare specifically to oncology, stating that the organizations implementing these principles are performing well but that in 99.9% of situations with cancer, we do not know outcomes. The high rate of incorporating innovation in cancer therapeutic regimens such as immunotherapy and targeted therapies adds further complications. There are also new treatments that can dramatically enhance the outcome but at cost levels that change the equation of value in a way that needs to be constantly reassessed **(Porter, 2008)**.

The relevance of patient-reported outcomes in cancer care is particularly high as treatment toxicity in cancer has a considerable effect on the quality of life and as survival benefits might be low. A systematic adoption of the use of PROMs in oncology clinical practices might allow delivering more patient-centered treatment decisions and enhanced measurement of the therapeutic value in patient perspective. Nevertheless, the issue of PROM execution in oncology practices that are busy and need medically complex patients to be attended to is still a challenge **(Porter, 2008)**.

Chronic Disease Management

Another area that VBHC principles can potentially significantly enhance the care provision and its outcomes is chronic disease management. Diseases such as diabetes, heart failure, and chronic obstructive pulmonary disease are long-term conditions under management with high levels of exacerbations that necessitate acute care. The episodic characteristics and the longitudinal time frames involved in managing chronic illnesses present opportunities and barriers to VBHC implementation ***(Kilaru et al., 2024)***

Multidisciplinary care would be better orchestrated by an Integrated Practice Unit that is structured around a particular chronic condition as opposed to the old, fragmented practice. In case of diabetes, IPU may include endocrinologist, diabetes educator, dietitian, podiatrist and ophthalmologist who should cooperate to control the state of the patient and avoid complications. Long-term nature of chronic disease management enables more outcome measures incorporating management of the disease, prevention of complications and quality of life of the patient ***(Kilaru et al., 2024)***

Nevertheless, it is difficult to describe suitable intervals of treatment of chronic illnesses. Under chronic disease management, unlike the surgical procedures which have definite starting points and definite end points, the care goes on without any natural points of episodes. Are episodes characterized by calendar year or exacerbation events or otherwise?

The selection of definition has a great influence on cost and attributing of outcomes.

Chronic disease care models based on bundled payment should provide an answer to the estimation of disease severity, patient compliance and social factors that create health outcomes. Food insecurity or lack of access to healthcare is a barrier to clinical management with an impact on the outcomes of patients with poorly controlled diabetes. The methodology of risk adjustment should be able to consider all these issues so that it does not discriminate against the providers of vulnerable groups at the cost of ensuring that care quality is manageable **(Dean et al., 2020)**.

Mental Health and Behavioral Services.

Another area where VBHC can be applied critically but unexplored is the mental health and behavioral health services. According to ***Douglas et al. (2025***), the limited range and size of current VBHC programs encourage the necessity of broad strategies that cover a wide range of healthcare requirements. Mental disorders, which impact significant fractions of the population around the world, and in many cases accompany chronic medical illnesses, need to be incorporated into value-based systems **(Douglas et al., 2025)**.

There are special issues in outcome measurements in mental health. There are standardized clinical indicators of the severity of symptoms (e.g., PHQ-9 in the case of depression, GAD-7 in the case of anxiety), however, due to the dimensions of mental health recovery functional restoration, quality of life, social integration, etc., broader scale assessment is needed. The stigma of mental health conditions makes patient involvement in outcome measurement and reporting a difficult task. Patients may not complete PROMs or fully reveal their symptoms due to privacy concerns, especially when the data may be transferred to payers or other healthcare providers. Establishing trust and proper privacy assurances are critical preconditions of meaningful mental health outcome measurement **(Douglas et al., 2025)**

Mental and physical health care integration in VBHC models has potential to achieve better outcomes and lower costs. Mental illnesses often make the treatment of chronic health conditions difficult, and it has been seen that depression severely affects diabetes self-management and adherence to cardiovascular disease treatment. Co-ordinated teams that take mental and physical health issues and aim to meet the needs of both areas may increase value delivery in both areas **(Douglas et al., 2025)**

GLOBAL STRUCTURE AND ANALYSIS

United States Implementation.

The US has led in VBHC research and implementation but has done so unevenly. ***Khalil et al.*** discovered that the United States is the most research-active in the field of VBHC, with 65% of the articles in their scoping review **(Khalil & Kynoch, 2021)**.

This leadership is in part indicative of the fact that value-based healthcare idea was developed in the United States due to the work of ***Porter and Teisberg*** and that the legacy of fee-based services induces specific pressure on the need to change the payment model. Natural experiments have been possible due to Center of Medicare and Medicaid Innovation (CMMI) owing to the presence of Medicare as the largest single payer. According to ***United Health Group (2025***), over 50 distinct value-based care pilots were developed by CMMI since 2010, or 12 models generated statistically significant cost savings by 2024. The success rate is relatively low and it indicates the difficulty in making payment models that being designed will result in sustainable financial performance and in preserving quality and access **(Porter & Teisberg, 2006)**.

The debate on voluntary and mandatory participation is something with big implications on the implementation of United States VBHC **(Finkelstein et al., 2018)**.

Kilaru et al. (2024) presents some evidence that mandatory participation can have certain equity advantages by addressing patient selection in the voluntary models, which implies that there is a policy tradeoff between equity objectives and provider autonomy. The implementation of VBHC is especially a challenge to the United States healthcare system fragmentation. Numerous payers with varying needs, absence of universal electronic health record systems, and suboptimal care coordination across settings hinder the process of organizing integrated practice units, measuring outcomes, and applying bundled payments, all of which are essential to care coordination **(Kilaru et al., 2024)**.

European Adoption and Adaptation

The implementation of VBHC in Europe has taken place in a different manner compared to the United States because of a varied setting of baseline structures and incentives. In their scoping review on VBHC performance management, ***Van Elten et al. (2023***) identified an overrepresentation of European studies, of which eleven identified papers were hospital-based and were rather recent (after 2015). The very public or not-for-profit ownership of European hospitals can result in alternative incentives of implementation compared to the more commercialized healthcare landscape of the United States **(Van Elten et al., 2023)**.

Moberg (2025) investigated the implementation of VBHC in Danish regional healthcare setting and discovered that both at regional level, there were mostly guidelines focusing on quality indicators instead of cost guidelines **(Møberg & Malmmose, 2025)**.

This quality strategic orientation enjoys reference to political and cultural settings in which explicit cost containment via patient-level rationing is met with increased opposition compared to market-based system in the United States. The research demonstrated intricacies in endeavors to incorporate patient perspectives in the general healthcare management systems.

Van der Nat et al. (2020) mention Swedish Sahlgrenska Hospital as one of the limited European implementations of IPU in which the latter was scientifically assessed. It demanded robust clinical leadership to be combined with an emphasis on the establishment of safe environment and trust between medical workers, which means that the technical implementation has to be supported with a cultural change. The traditions of stronger professional autonomy and collective decision making in the European healthcare systems can help and make such transformations more complex **(Van der Nat et al., 2020)**.

In European countries, the universal coverage systems remove part of the obstacles that exist in the decentralized system of the United States. Insurance of all citizens makes it easier to access the levels of outcomes at the population level and eliminate the barriers of financial access to value analysis. The European systems, however, have their own challenges such as budgetary constraints, lengthy queue in seeking elective procedures and political sensitivities over making an open resource allocation decision.

Other High-Income Countries

Other developed countries with high incomes such as Australia, Canada and Japan have experimented with VBHC concepts differently. According to ***Douglas et al. (2025),*** the majority of VBHC programs in the world are in high-income states, but studies beyond the United States and Europe are even more scarce **(Douglas et al., 2025)**.

The structure of any healthcare system, financing mechanisms, and cultural context of any country influence the way in which VBHC principles are understood and applied. The Australian healthcare system is a mixed public-private system, which is a special situation in the implementation of VBHC. Activity based funding of public hospitals, which began implementation nationally in 2012, has conceptual similarities in many aspects to bundled payment methods but has significant differences. The focus of utilizing the resources effectively and retaining the quality corresponds to the principles of value, but the process of outcome measurement is mainly more volume and process-oriented than patient-centered.

The single-payer systems of Canada have some fragmentation problems but have barriers of their own. VBHC implementation is complicated by long queues in the elective processes and in seeking specialist consultation, the payment model often being mainly the fee-for-service model, and insufficient integration of electronic health records. The shifting demographics of Japan where the population is aging at a harmful pace and it is a fee-for-service type of payment system give the country a specific urgency to transform in terms of value. Cultural conditions such as high tradition of physician autonomy, patient needs of speedy access to specialists, a tendency to provide acute care services in hospitals compared to community-based care might however complicate the attempts to restructure care into integrated practice units or introduce bundled payments that necessitates the coordination of care across the environments **(Douglas et al., 2025)**

Low and Middle-Income Countries.

The relevance of VBHC principles in low- and middle-income countries (LMICs) is not well investigated yet. ***Douglas et al. (2025)*** discovered the comparative lack of research in lower-middle-income nations, which poses a considerable void since such environments have extremely limited resources and the value optimization is of great importance. Whether the VBHC frameworks created in the high-income environment can be substantially applied to the resource-constrained environments with alternative epidemiological profiles and healthcare system designs remains a question. LMICs have some basic setbacks which might make direct usage of the high-income nation VBHC models impossible **(Douglas et al., 2025)**.

Minimal electronic health records infrastructure makes it difficult to conduct a systematic measurement of outcomes and integration of data. The lack of healthcare personnel renders the establishment of multidisciplinary integrated practice unit impossible on several conditions. Cost-effectiveness assumes a different dimension when patients are unable to pay the recommended care no matter how good it is due to high out-of-pocket payments and catastrophic health spending.

But the principles of value maximization of health outcomes over costs have a very strong ring in resource constrained environments. The necessity of focusing on the interventions with the highest benefits to the population health per dollar expended is arguably more urgent in LMICs than in high-income nations. The simplified outcome measurement strategies, paying attention to high-priority conditions, adapting TDABC principles to resource tracking in LMIC settings, and innovative types of payment models that enable care coordination may all be worth consideration ***(United Health Group.,2025)***

The initiatives of universal health coverage in most LMICs represent an opportunity to introduce the principles of value at the very beginning instead of changing the systems that are based on fees. Universal coverage in other countries such as Rwanda, Thailand and Ethiopia may be able to design payment systems based on value since the start and not the painful transition to the volume-based systems. Nevertheless, there is limited evidence on the best practices, and future studies and implementation science are an opportunity of great importance (***United Health Group.,2025)***

FUTURE DIRECTIONS AND EMERGING TRENDS

Artificial Intelligence and Advanced Analytics

1.1 The integration of artificial intelligence and machine learning in healthcare presents both possibilities and difficulties for advancing value-based healthcare (VBHC). ***It has been*** noted the ongoing transformation across industries, with healthcare at a key decision point. Although there are studies on AI in health systems, few of them have produced long-lasting, systemic improvements. This is frequently the result of issues that stem from the system rather than just the technology. Predictive analytics for risk assessment, pattern recognition for outcome prediction, natural language processing for extracting information from clinical notes, and decision support tools for treatment planning are all ways AI can be applied to VBHC. These technologies may boost value by identifying possibilities for process improvement, promoting personalized medicine, and assisting in the targeted delivery of therapies to patients who will benefit the most **(Rahamtalla et al., 2025)**.

Teymourifar (2025) notes that technological advancements may exacerbate systemic problems if they are not consistent with value-based care. When implementing AI, it is necessary to align it with values, pay close attention to algorithmic bias that may exacerbate health disparities, be transparent about how algorithms make predictions, and integrate it into clinical operations **(Teymourifar, 2025)**.

How to transform innovative concepts into tangible benefits for patients and health systems is the key focus. This necessitates putting more emphasis on teamwork, leadership, and consensus regarding patient outcomes rather than merely utilizing technology for its own sake. Healthcare organizations should prioritize patient needs and value goals over using AI to search for issues**(Rahamtalla et al., 2025)**

Precision Medicine and Personalized Care

VBHC's patient-centered care aligns with precision medicine, which tailors treatment based on genetic and other characteristics. Instead of employing a one-size-fits-all approach that only benefits a select few, precision medicine aims to improve outcomes by providing the appropriate treatments to the right patients. This concept aligns with value principles. However, VBHC faces challenges due to precision medicine. The cost of many precision tests and treatments is higher than that of conventional techniques, which changes the value and necessitates careful research. How should value be calculated if a genetic test is expensive but aids in selecting a treatment that has a high response rate? Precision medicine presents challenges for payment models since costs vary with new tests and therapies.

Beyond VBHC methods, more work may be required to measure outcomes for precision medicine. The benefits of personalized treatment, such as avoiding harm from bad treatments and comfort from genetic data, may not be fully demonstrated by standard results. Precision medicine may take longer to show results than VBHC periods, primarily for genetic risk-based preventive measures.

Both perspectives must shift in order to integrate precision medicine into VBHC. Given that average outcomes across groups might not be valuable for some patients, value methods must take treatment changes into account. Payment models must adapt to handle information about which patients benefit from precision techniques while maintaining cost and usage controls.

Social Determinants of Health Integration

Social factors must be included in VBHC since it is evident that they have a significant impact on health. In order to prevent harm to those who assist at-risk individuals, the ***International Health Forum (2024) states*** that risk methods must take social factors into account. However, how to incorporate social factors into models of value measurement and payment is unclear. One strategy to address social factors in VBHC is through social needs programs. Healthcare organizations are assessing patients for transportation, housing, and food insecurity and connecting them with resources. However, it is still unclear how social program costs should be included in value and whether healthcare organizations should handle social needs outside of their regular duties.

It may be necessary to expand payment models to cover social work that addresses health barriers. Transportation to therapy or home modifications to reduce the risk of falls could be included in a joint replacement payment. These services are frequently excluded from regular payment plans, even though they may have an impact on outcomes. One step is to experiment with flexible funding, which enables healthcare organizations to use resources to address social needs in payments. moving forward.

Another route is equity-focused value systems that make reducing differences a matter of interest. Value could be based in part on closing the gap between those who have advantages and those who do not, rather than merely measuring average results. Although more work is needed to determine how to achieve these effects, ***Kilaru et al.'s (2024)*** finding that required participation decreased problems demonstrates that payment models can advance fairness goals **(Kilaru et al., 2024)**.

System-Level Transformation

In order to properly realize VBHC, the whole system needs to be changed, not just certain projects. Van Staalduinen et al. (2022) say that one provider can't do it alone. True value-based health care (VBHC) needs a well-coordinated plan in which everyone sets goals and works together to make decisions and take action.
For this system change to happen, everyone needs to agree on a number of things. These include IT systems that make it easier to share data and track results, training programs that get employees ready to work in teams, rules that promote collaboration and new ideas instead of getting in the way of them, and payment plans that reward value instead of volume. In some sectors, improvement won't be useful if other people fall behind.
Patients also need to do more to add value. People mostly see them as test subjects for outcomes right now. Instead, they should help make care plans, set goals, and find areas that need work. This would make care better and fit with what the patient wants.

To make the system better, everyone needs to work together (Van Staalduinen et al., 2022). Douglas et al. (2025) say that the current VBHC efforts are too modest and that bigger strategies are needed for system-wide change. This means that patients, community groups, payers, lawmakers, and clinicians all need to have the same value-based perspective. Without it, many projects stay limited and just affect certain hospitals or departments instead of changing the whole system (Douglas et al., 2025).

IMPORTANT VIEWPOINTS AND DISAGREEMENTS

What is Value and how do we measure it?

The definition and assessment of value in healthcare are still hotly debated topics. According to Porter, value is calculated by dividing results by costs, but this isn't as straightforward as it seems. Is it society, payers, providers, or patients who determine what outcomes are important? How can we compare various outcomes? Should patients determine what matters, or should longevity always take precedence over quality of life?

According to ***Møberg (2025),*** VBHC has the ability to concentrate on various aspects that affect its true values. They may have entirely different objectives; some may seek to reduce expenses, while others may seek to enhance quality. This ambiguity may cause confusion and produce contradictory research findings. Furthermore, it's not clear whose expenses should be included. Should we consider it from the perspective of the payer (reimbursements), the provider (cost of care), the patient (including lost wages and money), or society (all costs)? Different outcomes from each point of view have the potential to alter our understanding of best care. How far into the future we should look is another question. Even if more costly treatments eventually produce better results, short-term calculations may favor less expensive ones **(Møberg & Malmmose, 2025)**.

Fairness and unintended problems

We must consider the possibility that VBHC will exacerbate health care disparities. Payment plans may encourage providers to forego expensive tests or treatments in an effort to save money, which could harm patients who already have a number of health problems and cause more problems, according to Sullivan et al. (2013). This might disadvantage patients who are complex and at risk. Cherry-picking, or selecting healthier patients while avoiding sicker ones, is another risk. Although risk adjustment attempts to take patient complexity into consideration, it is unable to fully account for all variations in social and health factors **(Sullivan et al., 2013)**.

Required CJR reduced complications for dual-eligible patients, according to **Kilaru et al. (2024),** indicating that value-based models can increase equity. Minorities' access to surgery decreased under CJR hospitals, though, indicating that there might be unforeseen consequences that need to be monitored and addressed. Fairness concerns also impact communities and providers **(Kilaru et al., 2024)**.

Smaller hospitals and practices that serve high-risk groups may not have the money to undertake the result tracking, TDABC implementations, and care coordination that VBHC needs. If value-based payment models favor well-funded organizations, they could lead to consolidation and hurt providers who support the communities that need it most.

Provider independence and professional identity

We need to think about the relationship between VBHC's demand for regular result tracking and the independence and expert judgement of providers. Physicians and other professionals may not like procedures that limit their options to broad level evidence that doesn't apply to everyone. It is difficult to measure the art of medicine, which tailors knowledge to each patient.

According to Møberg (2025), one of the main problems is when medical professionals, particularly those accustomed to fee-for-service models, dislike change. This mindset may result from issues with their professional identity and control in addition to financial concerns. VBHC's performance metrics and care plans may be perceived by physicians who are trained to make decisions alone as an infringement on their authority (Møberg & Malmmose, 2025).

Professional boundaries and hierarchies may benefit or suffer from the shift to team-based care. Although working as a team can lead to better outcomes, it also requires sharing responsibility and sacrificing some independence. People may not be prepared for the teamwork required by the IPU model by professional training (Møberg & Malmmose, 2025)

Additionally, we must consider how VBHC may add to the administrative workload. Instead of enhancing provider work, excessive time spent on cost and result tracking may detract from patient care and lead to burnout. The need for information must be balanced with the desire to avoid unnecessary paperwork that could undermine the goal of value-based care.

Table 1. Comparison of Data Validation, Evaluation, and Statistical Analysis (2021–2025)

Author (Year)	Study Design	Sample / Data Source	Data Validation Method	Evaluation Approach	Statistical Analysis
Khalil et al. (2021)	Scoping Review	145 studies	PRISMA, dual screening	Thematic & quantitative synthesis	Frequencies, percentages
Kilaru et al. (2024)	Retrospective observational	1,603,555 Medicare records	CMS database verification	Pre–post outcome evaluation	Multivariable regression, DiD
Kidanemariam et al. (2024)	Prospective cohort	Clinical patients	Validated PROMs	Patient-centered outcomes	Paired t-test, regression

This table exemplifies appropriate methodological diversity—each study's design, validation approach, and statistical methods are reasonably well-matched to its research question. The move toward bigger prospective research (2024) and better syntheses (2025) shows that the evidence base is growing. Nevertheless, significant deficiencies persist: direct discourse on unmeasured confounding, clear assumption-testing for parametric methodologies, and sensitivity analyses for synthesis determinations would enhance inferences across all investigations. The trajectory from 2021 to 2025 shows that healthcare research is moving toward larger, more complex validation and more thorough synthesis. This is a good indicator for the quality of evidence in this area.

Narrative Synthesis of Statistical Methods

There were big discrepancies in the ways that the studies that were published in the last five years checked their data, evaluated it, and did statistical analysis. To ensure data accuracy and dependability, research employing primary data collecting frequently utilized pilot testing, content validity indexes, and previously validated instruments. Conversely, studies utilizing administrative or secondary databases prioritized database validation and standardized extraction methodologies. The study's objectives were well aligned with the evaluation methodologies. Quasi-experimental and cohort designs evaluated changes in outcomes following interventions or across time, whereas cross-sectional and correlational research primarily examined correlations between variables. Program-level and system-level studies often utilize pre- and post-comparisons to see how well something works.
Descriptive statistics, which are frequently utilized, were employed to summaries the sample characteristics in terms of statistical analysis. To test hypotheses and control for confounding variables, inferential procedures such as chi-square tests, t-tests, ANOVA, correlation coefficients, and multivariable regression models were commonly utilized.

Table 2: VBHC Evidence Table: Key Studies, Parameters, and Implications

Author	Study Information	Parameter Focus	Parameter Foundation	Results	Recommendations
Khalil et al. (2021)	**Design:** Scoping review **Sample:** 145 studies **Date:** 2025	VBHC implementation, professional collaboration, follow-up, measurement	PRISMA guidelines, dual screening, thematic	VBHC improves collaboration, follow-up, and outcome measurement,	Standardize outcome measurement; foster interdisciplinary research

Finkelstein et al. (2018)	**Design:** Quasi-experimental (difference-in-differences) **Sample:** 280,16	Impact of bundled payments on costs and outcomes	Comparison of treatment vs. control groups; Medicare claims analysis	Modest Medicare savings, driven by reduced post-acute care use; no quality decline	Bundled payments can control costs; monitor patient selection and equity
Kidanemariam et al. (2024)	**Design:** Prospective cohort **Sample:** Vestibular schwannoma patients	Use of PROMs in VBHC pathway, patient-centeredness	Validated PROMs, paired t-tests, regression	PROMs did not significantly improve patient-centeredness; patients did not anticipate discussing PROMs	Integrate PROMs into clinical dialogue, not just as an added tool
Kilaru et al. (2024)	**Design:** Retrospective observational **Sample:** 1,603,555 Medicare beneficiaries	Effect of bundled payments on socioeconomic disparities in outcomes	CMS data verification, multivariable regression, difference-in-differences	Mandatory CJR participation linked to reduced disparity in complications	Mandatory models may promote equity; further research on mechanisms needed
Liu, Rothrock, & Edelen (2024)	**Design:** Systematic review & guidelines **Sample:** 76 studies	PROM selection and use, mechanisms for outcome improvement	Categorization of PROMs (condition-specific/global, universal/domain-specific)	43% of studies showed improved outcomes with PROM feedback; 68% when used for symptom tracking	Select PROMs based on purpose, population, psychometric properties, and feasibility

This evidence table shows how VBHC is moving from the pilot phase (the 2018 Finkelstein quasi-experiment) to the implementation research phase (the 2024–2025 syntheses and prospective studies). The evidence basis shows: 1. Bundled payments can keep expenses down without making quality seem to drop, but it hasn't been shown that they actually improve outcomes.

2. PROMs enhance results when actively incorporated into clinical workflow, rather than when passively gathered.

3. Mandatory participation models may foster equity; nevertheless, the mechanisms and definitive result impacts necessitate further investigation.

4. Standardized outcome measurement and interdisciplinary collaboration are still important but need more research.

The most important conclusion is probably that VBHC success depends on how well it is put into practice, not just how well the framework is adopted. Measurement tools, payment plans, and process costing methods are all important, but they aren't adequate. These must be integrated into cohesive clinical procedures where data actively informs decisions. Accelerated recognition of this integration challenge—and opportunity—in healthcare transformation is suggested by the 2024–2025 research focus.

Limitations of market-based approach

It's important to question whether competition between businesses is the right way to provide health care, and if VBHC's ideas really fit with health care's special qualities.

Health care is different from normal markets because providers have more information than patients, consumers can't judge quality before buying, care is often needed in emergencies which limits choices, and individual health decisions impact everyone's health. ***Porter and Teisberg (2006***) believe that competition on value—providers competing to give the best results at the lowest costs—can improve efficiency and quality. But critics say that competition can drive up prices rather than down, as providers compete through facilities and advertisement, and that the pursuit of market share leads to redundant technology and facility growth **(Porter & Teisberg, 2006)**.

We should also inquire as to whether VBHC is a novel concept or merely a new moniker for cost control. VBHC might just be a politically acceptable way to limit resources if the goal is cost-cutting without actually improving outcomes. Some plans lack cost guidelines, which indicates that opinions on how to value both sides of the equation are unclear**.** Competition may not be as effective as other systems that place a higher priority on social cohesion, universal access, and health care as a human right **(Møberg & Malmmose, 2025)**

SYNTHESIS AND RECOMMENDATIONS

Key Findings Summary

Research shows that VBHC implementation can result in better care coordination, lower costs without sacrificing quality, and better measurement of results **(Finkelstein et al., 2018; Khalil & Kynoch, 2021)**. Certain uses, such as joint replacement bundled payments, demonstrate slight but significant cost savings, mostly due to decreased institutional post-acute care utilization, while preserving quality as indicated by ED visits, readmissions, and mortality **(Finkelstein et al., 2018)**

But there are still a lot of problems with the implementation. There are a lot of things that make it hard to put VBHC into practice, such as organizations and cultures that don't want to change, a lack of standardized ways to measure outcomes, a lack of evidence on the best ways to implement it, worries about financial sustainability, and concerns about fairness **(Van Elten et al., 2023) (Douglas et al., 2025)**.

Implications for Practice

Healthcare organisations aiming to adopt VBHC must acknowledge that fragmented implementation of individual components is inadequate. ***Van Elten et al.*** (2023) discovered that hospitals seemingly do not regard VBHC as an integrative management model, opting to apply merely one or two components instead of a thorough transformation . To be successful, implementation needs to take into account all of the technical, organisational, cultural, and financial aspects at the same time **(Van Elten et al., 2023)**.

Van der van et al. (2022) stress that Porter and Teisberg's original formulation did not take into account the fundamental culture change that was needed. They suggest that the strategic agenda should be expanded to include creating a culture of value delivery, setting up outcome-based learning environments, improving quality based on outcomes, and building platforms for professional learning and inspiration. If you don't invest in changing the culture at the same time as you install the technology, the whole value-based program could collapse **(Van Staalduinen et al., 2022)**.
Investing in data infrastructure should be a top priority. To evaluate outcomes, keep track of costs, and keep an eye on performance, electronic health records, administrative systems, patient-reported outcomes platforms, and TDABC systems must all work together **(Miller, 2009)**.Organisations need to look at their current data capabilities, find any holes, and make phased deployment strategies. They should also understand that developing an enabling technology platform is a big but required investment.
To avoid systemically disadvantaged physicians who care for vulnerable populations, risk adjustment methods must take into account socioeconomic factors and the complexity of patients **(McWilliams et al., 2023)**. Organisations should endorse risk adjustment solutions that uphold accountability for service quality while fairly compensating for complexity. Mandatory involvement in value-based models may offer specific equity advantages by inverting the patient selection observed in voluntary approaches**(Kilaru et al., 2024)**

Implications for Policy

Policymakers need to find a balance between protecting access and fairness and encouraging VBHC innovation. The CJR program's experience illustrates that required bundled payment structures can be good or bad. CJR diminished disparities in complications for dual-eligible patients **(Kilaru et al., 2024)** and realised modest cost savings without adverse effects on quality **(Finkelstein et al., 2018)**. However, apprehensions regarding provider burden and minority access led to a decrease in mandatory participation. In addition to cost and quality criteria, future value-based payment models should also have clear equity measurements. Instead of only evaluating average outcomes, payment formulas should incentivise efforts to close the gap between disadvantaged and privileged groups **(Kilaru et al., 2024) (McWilliams et al., 2023)**. By aligning financial incentives with equity goals, these initiatives would motivate providers to put money into fixing social determinants and closing care gaps.
(Michael E. Porter et al., 2016) say that standardization efforts through global alliances like ICHOM should continue, but they need to find a balance between being the same everywhere and being able to change to fit different regions. Overly rigid standardization may not adequately capture results relevant to specific populations or therapeutic environments. While permitting suitable customization for a range of patient needs and care environments, policies should promote the standardization of measurements.

Regulations must change to facilitate VBHC implementation rather than impede it. Care integration and creative payment models are frequently hampered by current antitrust laws, insurance requirements, and healthcare fraud and abuse laws (Healthcare Innovation Group, 2020). The objective of policymakers' reviews of regulatory frameworks should be to eliminate needless barriers to value-based transformation while preserving suitable patient protections and market competition.

Implications for Research

Academic and implementation science communities should pay attention to important research gaps. According to Douglas et al. (2025), the majority of VBHC initiatives were carried out in high-income nations, with comparatively few studies conducted in lower-middle-income nations. Given that resource-constrained settings face significant constraints that make value optimization especially crucial, research investigating potential adaptations of VBHC principles for these settings is of utmost importance **(Douglas et al., 2025)**.

There remains a scarcity of comparative effectiveness research examining diverse implementation strategies across various situations and organizations **(Van Elten et al., 2023)**. The field necessitates comprehensive evaluation studies that juxtapose various methodologies for IPU organization, outcome measurement, TDABC implementation, and the transition to bundled payments, employing experimental or quasi-experimental designs. These studies should examine not only the success of implementations but also the specific tactics that are most effective in certain contexts.
We need to find out if VBHC can continue and grow in the long term. Most evaluation studies look at short-term results (one to three years), yet there are still crucial questions about long-term effects. As providers get used to new ways of paying, do the savings stay the same or go down over time? Do initial improvements in quality last, or do they level off? What impact does prolonged engagement in VBHC have on organizational cultures and structures? Longitudinal studies that follow installations for five to 10 years would answer these questions.
We need to learn more about how VBHC affects equity results. The mechanisms driving this impact remain unidentified; however, ***Kilaru et al. (2024)*** present results indicating that mandatory bundled payment participation reduced disparities in complications for dual-eligible patients. Process evaluation studies that look at how VBHC deployments affect the care of vulnerable groups might help create more fair value-based models. These studies would look at how patients are chosen, how much treatment they get, and how the quality of care differs between patient groups **(Kilaru et al., 2024)**.

CONCLUSION

Value-based healthcare has been the most popular way to change healthcare around the world in the last 10 years. It promises to fix the long-standing issues of rising costs, uneven quality, and fragmented care delivery. This comprehensive review of literature from 2015 to 2025 indicates that while Value-Based Healthcare (VBHC) could enhance quality and efficiency via integrated practice units, bundled payments, cost accounting, and outcome measurement, significant barriers impede widespread implementation and the realization of its full potential.
Studies indicate that Value-Based Health Care (VBHC) can provide modest cost reductions without compromising quality,

mostly through enhanced care coordination and decreased utilization of institutional post-acute care **(Finkelstein et al., 2018) (Khalil & Kynoch, 2021)**. Specific applications, like bundled payments for joint replacement and TDABC implementations in surgical specialties, show that it is possible to measure outcomes and costs at the patient episode level. There are still problems with putting patient-reported outcome measures into practice, but they make it simpler to include patient views in value assessment **(Kehyayan et al., 2025; Liu et al., 2024)**. Nonetheless, the revolutionary capacity of VBHC is jeopardised by considerable challenges. Conceptual uncertainty regarding the definition of VBHC—where implementations prioritise either results or costs, rather than both **(Møberg & Malmmose, 2025; Van Staalduinen et al., 2022)**poses a risk of fragmenting the area and undermining theoretical foundations. The tendency of hospitals to use individual VBHC components rather than comprehensive plans (***van Elten et al., 2023***) suggests that VBHC may be evolving into a management trend where organizations selectively accept beneficial elements instead of experiencing a total transformation **(Van Elten et al., 2023)**.

Cultural resistance to change is probably the most important but least recognized problem. This is especially true for professionals who are used to fee-for-service models **(Møberg & Malmmose, 2025; Van Staalduinen et al., 2022)**.The technological implementation of result measurement systems, cost accounting tools, and bundled payment contracts is inadequate without simultaneous investment in cultivating cultures of value delivery, outcome-based learning, and ongoing quality enhancement. For this cultural transition to happen, there need to be safe places where medical personnel can work together, be open about their weaknesses, and honestly look at their work.

The consequences for equity necessitate continuous scrutiny. Evidence indicates that well-structured value-based models can enhance equality by reducing inequities among disadvantaged populations **(Kilaru et al., 2024)**. There are also worries, meanwhile, regarding the likelihood of patient selection, the fact that minorities can't get care, and the fact that physicians who treat complex patients are at a disadvantage **(Sullivan et al., 2013)**. To make sure that value-based transformation improves health equity instead of making it worse, we need mandatory participation tactics that fight selection biases, enough risk adjustment that takes social factors into account, and the clear inclusion of equity measurements. As we look to the future, a number of key paths become clear. To reach their full potential, organizations need to align their strategies with their values instead of just chasing after technology for its own sake. However, artificial intelligence and advanced analytics can help improve predictive risk stratification, outcome prediction, and care optimization **(Teymourifar, 2025)**. Integrating social determinants of health into value-based healthcare (VBHC) frameworks through enlarged bundles that encompass social services, adaptable finance mechanisms, and equity-centric value measures may enhance effectiveness and equity.

A fundamental prerequisite for the success of Value-Based Health Care (VBHC) is a transition at the system level that requires coherence among payment models, regulatory frameworks, educational systems, and information technology infrastructure **(Douglas et al., 2025)**. Transformative potential is constrained by disjointed advancements in specific areas, lacking simultaneous advances across the entire healthcare ecosystem. To bring about permanent change, it is important for payers, providers, lawmakers, patients, and communities to work together toward a similar goal. There are big gaps in our knowledge about how well VBHC works in different healthcare settings because most of the research and use of VBHC is done in high-income countries, especially the United States (65% of studies) **(Douglas et al., 2025; Khalil & Kynoch, 2021)**. Value principles that optimize health outcomes relative to resource utilization are generally applicable, since healthcare systems globally contend with challenges such as ageing populations, escalating expenditures, and enduring health inequities. However, tactics for putting plans into action that were made in places with a lot of resources may need to be changed a lot for places with fewer resources and different epidemiological profiles, healthcare systems, and cultural norms. Very few people would disagree that healthcare should be value-based, so the real question is how to put value principles into practice while still taking into account valid concerns about unintended consequences, professional autonomy, and fairness. In the last ten years, we've learned a lot about the good and bad sides of value-based change. For the next ten years, we need to focus on fixing implementation problems by doing rigorous comparative effectiveness studies, carefully thinking about how equality will be affected, consistently investing in culture change, and making sure that the system is in line with patient-centered value delivery.

The healthcare business is at a crossroads. One option would lead to more fragmentation, as enterprises would just use some practical VBHC components without making any major changes. This would make the problems of high prices, uneven quality, and long-lasting disparities even worse. A better path requires a constant commitment to value-based change that takes into

account organizational, cultural, technical, financial, and equality issues all at once. Choosing the second path requires courageous leadership, collaboration from stakeholders, and the recognition that authentic value-based healthcare represents a profound reevaluation of the primary objective of healthcare: to optimize health and well-being for all individuals with the available resources.

DECLARATION OF COMPETING INTERESTS

The authors declare no competing interests

DECLARATION OF GENERATIVE AI USE

Authors declare the use of generative AI in the manuscript preparation process in responsibly and with complete Human control.

CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Mr. Ahmad S. Alharouny and Prof. Samir Y. Marzouk. The first draft of the manuscript was written by Aly Okasha and all authors commented on previous versions of the manuscript. All authors read and approved of the final manuscript.

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