

ORIGINAL RESEARCH ARTICLE

Transitioning from Volume-Based to Value-Based Healthcare: A Systematic Review of Implementation Strategies and Outcomes

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ABSTRACT

Background: Health systems have long reimbursed activity rather than results. Fee-for-service arrangements reward the quantity of services delivered and say little about whether patients become healthier. Value-based healthcare (VBHC) proposes to reorient financing, organisation and measurement around outcomes achieved per unit of cost. A decade of experimentation now allows an appraisal of what implementation strategies work, for whom, and with what consequences.

Objective: To synthesise evidence on implementation strategies and outcomes of the transition from volume-based to value-based healthcare, to compare findings across payment models and health systems, and to identify the conditions under which transitions succeed or fail.

Methods: A PRISMA 2020-guided structured review was conducted of a purposively assembled corpus of 95 sources, comprising systematic reviews, randomised and quasi-experimental evaluations, implementation studies, policy analyses and regional scholarship. Findings were organised into payment, organisational, measurement and equity domains and appraised analytically rather than meta-analytically, because of heterogeneity in interventions and outcomes.

Results: Evidence is strongest for bundled payments in elective orthopaedic episodes, where modest spending reductions occurred without measurable quality loss. Evidence for pay-for-performance and hospital value-based purchasing is weaker, with small or null effects on patient outcomes and recurring concerns about measurement burden, gaming and the penalisation of safety-net providers. Accountable care and global budget models yield modest savings, concentrated among physician-led organisations. Implementation success depends less on the payment instrument than on leadership, data infrastructure, clinician engagement, and risk adjustment that protects vulnerable populations.

Conclusion: Value-based transitions are best understood as organisational and measurement reforms supported by financial alignment, not as payment reforms alone. Policymakers should pair incremental payment redesign with investment in outcome registries, cost-accounting capability, equity safeguards and workforce wellbeing.

Keywords: value-based healthcare; fee-for-service; pay-for-performance; bundled payments; accountable care; health policy; implementation science; PRISMA

1. INTRODUCTION

Health systems around the world face the same structural dilemma: spending continues to rise while the link between money spent and health gained remains loose. International comparisons show that the United States devotes a far larger share of national income to health care than other high-income countries without achieving correspondingly superior population outcomes, with higher prices and administrative costs identified as principal drivers [1]. Estimates of waste in the American system run to hundreds of billions of dollars annually, and a substantial portion of this is attributed to failures of care delivery and coordination, overtreatment, administrative complexity, and mispricing [2,3]. Although the American case is extreme, the underlying logic is universal. When payment follows activity, the system acquires an inherent appetite for more activity.

Value-based healthcare offers a counter-logic. In its most influential formulation, value is defined as the health outcomes that matter to patients relative to the cost of achieving them, measured across the full cycle of care for a medical condition rather than within the silo of a single service or provider [4]. This definition is deliberately demanding. It rejects cost containment pursued without reference to results, and it equally rejects quality improvement pursued without reference to cost. It is consistent with, but narrower and more operational than, the Triple Aim of better care, better population health and lower per-capita cost [5].

Policy has moved in this direction at scale. A widely cited 2015 announcement by the United States Department of Health and Human Services set explicit targets for the share of Medicare fee-for-service payments to be tied to alternative payment models, signalling that the transition was now a stated national objective rather than a series of isolated pilots [6]. Comparable ambitions, using different instruments, have shaped reforms in the United Kingdom, the Netherlands, Sweden and elsewhere.

The relevance of this transition extends well beyond high-income settings. India carries a heavy and changing disease burden in which communicable, non-communicable and injury-related conditions overlap, and recent syntheses document the epidemiological transition and its public health consequences [7,8]. Earlier assessments of Indian health reform emphasised the need to move toward universal coverage with accountable and efficient purchasing [9,10]. Global analyses further demonstrate that poor-quality care, and not only lack of access, now accounts for a large proportion of avoidable deaths in low- and middle-income countries, which strengthens the argument for systems that pay for and measure outcomes [11].

Despite the policy momentum, the evidence base is fragmented. Reviews have examined individual instruments such as pay-for-performance, bundled payments or accountable care organisations, while a separate stream of work has examined organisational adoption of the VBHC agenda through scoping reviews and case studies [12]. Few syntheses place these streams side by side. Practitioners therefore lack a coherent account of what has been tried, what happened, and why results differ across contexts.

This review addresses that gap. It asks four questions. First, what implementation strategies have been used to move from volume-based to value-based care? Second, what outcomes, in terms of cost, quality, patient experience, equity and workforce wellbeing, have been reported? Third, how do findings differ across payment models, health systems and stakeholder perspectives? Fourth, what organisational and policy conditions separate successful transitions from disappointing ones? The paper contributes a structured comparison of payment models, a synthesis of earlier reviews and their results, and an analytical framework linking financial, organisational, measurement and equity levers.

2. Conceptual Foundations

2.1 From volume to value: the logic of the transition

The volume-based model reimburses providers per service, per day or per admission. Its attraction lies in simplicity and in clinician autonomy: each unit of work generates a payment, and the payer need not specify what the work achieves. Its weakness lies in what it omits. Fee-for-service does not distinguish a high-quality from a low-quality procedure, does not reward prevention that avoids a service altogether, and does not reward coordination between providers whose separate billings may conflict with the patient's interest. Competitive strategies built around this payment logic tend to emphasise service-line growth and market share, so that value for the patient becomes a by-product rather than the objective [13].

The value-based alternative reframes competition and organisation around results. Its core propositions are that care should be organised around patient medical conditions, that outcomes and costs should be measured for every patient, that payment should be bundled to cover care cycles, that integrated care delivery should be built across facilities, that geographic scope should be expanded to concentrate expertise, and that information technology should be aligned with these goals [13,14]. A more recent strategic framework argues that these elements are most usefully treated as a system of mutually reinforcing components and not as a menu from which organisations may choose freely, because partial adoption often leaves the underlying incentives intact [15].

2.2 Value as a measurement problem

Because value is a ratio, both the numerator and the denominator must be measurable. On the denominator side, traditional hospital accounting allocates costs through charges or departmental overheads, which obscures the resources actually consumed by a patient across a pathway. Time-driven activity-based costing was proposed as a remedy, estimating the cost of each resource used over the care cycle by mapping process steps and the capacity cost of each resource [16]. On the numerator side, the outcomes that matter to patients include survival, functional status and the burden of treatment, and they need to be collected with validated instruments rather than inferred from administrative proxies. Patient-reported outcome measures are the principal tool for capturing these domains, and have been argued to be capable of transforming how health services are evaluated and managed [20].

Definitions of health itself are contested. Experience in England indicates that value-based commissioning requires a prior decision about whether health means the absence of disease, functional capacity, or a broader sense of wellbeing, because the chosen definition shapes which outcomes are measured and which services are therefore judged valuable [21]. Applied to people living with complex long-term conditions, the VBHC framework raises further difficulties, since outcomes in such populations are multidimensional and may not be attributable to a single provider or episode [22].

2.3 Widening the aims: from the triple aim to the quintuple aim

The original Triple Aim was criticised for omitting the people who deliver care. The quadruple aim added clinician and staff wellbeing, arguing that a burned-out workforce cannot sustain improvement in the other dimensions [17]. A further extension added health equity as a fifth aim, on the reasoning that improvements which widen disparities cannot be regarded as improvements in value for the population [18]. This widening is not rhetorical. Physician burnout is associated with consequences for quality, safety and retention, and it is closely tied to the administrative and documentation burdens that many value-based programmes inadvertently increase [19]. The evaluation framework used in this review therefore treats cost, quality, experience, workforce and equity as co-equal outcome domains.

2.4 Leadership as an enabling condition

Transitions of this kind are not delivered by payment formulas alone. They require leaders who can reconcile clinical and managerial logics, sustain attention over multi-year change, and make resource decisions under uncertainty. Work on leadership in hospital administration has examined which styles support effective governance in complex clinical organisations [23], and this theme recurs in the implementation evidence reviewed below.

3. Methods

3.1 Design and reporting standard

The review followed the PRISMA 2020 reporting guideline for systematic reviews [24], with structural elements borrowed from PRISMA-ScR where the aim was mapping and not effect estimation [25]. Methodological accounts of transparent mapping of research landscapes informed how the search logic, eligibility and charting were documented [26,27]. Earlier systematic work on digital transformation in hospital management provided a template for reporting heterogeneous organisational interventions in a structured way [28], and published systematic review and meta-analytic work in related health fields informed the approach to data extraction [29].

Because the intervention landscape spans payment instruments, organisational redesign and measurement systems, outcomes could not be pooled quantitatively. A narrative, analytical synthesis was therefore adopted, with comparative tabulation of findings by instrument and by system.

3.2 Eligibility criteria

Table 1 summarises the criteria applied.

Table 1. Eligibility criteria (PICO-style) applied in the structured review

Element	Inclusion	Exclusion
Population	Health systems, hospitals, physician groups and payers undergoing or evaluating a shift away from fee-for-service	Studies of single clinical interventions with no payment or organisational reform component
Intervention	Pay-for-performance, hospital value-based purchasing, bundled or episode payments, accountable care and shared savings, global budgets, VBHC organisational programmes, outcome and cost measurement initiatives	Purely theoretical commentary without empirical or policy-analytic content
Comparator	Fee-for-service, pre-reform periods, matched comparison groups, or cross-system comparison	None required for descriptive and policy papers
Outcomes	Spending, utilisation, clinical quality, mortality, patient experience, equity, workforce effects, implementation barriers and facilitators	Studies reporting only technical coding or billing outcomes
Study design	Systematic and scoping reviews, randomised and quasi-experimental evaluations, qualitative implementation studies, policy analyses, regional scholarship	Opinion pieces without evidential basis
Language and period	English; 2005 to 2026 for empirical evaluations, earlier for foundational frameworks	Non-English sources and items without verifiable bibliographic data

3.3 Information sources and selection

No live bibliographic database query was executed for this manuscript. The corpus was assembled purposively from two sources: the author-supplied reference library, and landmark peer-reviewed reviews, evaluations and policy analyses on value-based reform. Selection followed the PRISMA stages of identification, screening, eligibility and inclusion, with the counts reported below for transparency.

PRISMA 2020-style flow of the evidence corpus

- *Identification*: 117 entries in the supplied reference library, plus 67 additional peer-reviewed sources identified purposively (total 184 records).
- *Screening*: 2 library entries removed for incomplete bibliographic data. A further 87 library entries were excluded at title level as topically unrelated (for example, yoga philosophy, education accreditation, general law and sociology, climate and geopolitics). 95 records remained.
- *Eligibility*: All 95 records were assessed against the criteria in Table 1.
- *Included*: 95 sources in the synthesis, of which 28 derive from the supplied library and 67 from the purposive search.

3.4 Data charting and appraisal

For each source the following were charted: design, setting, instrument, comparator, reported effect on cost, quality, equity and workforce, and stated implementation barriers. Reliability was appraised using design-appropriate judgement. Systematic reviews were weighed above single-site evaluations, and quasi-experimental studies using comparison groups and pre-trend checks were weighed above uncontrolled before-and-after comparisons. Findings that rested on a single study were flagged as provisional.

3.5 Research integrity

The review adhered to standard ethical expectations for secondary research, including accurate attribution, absence of selective reporting and transparent acknowledgement of limitations [30]. All text was composed originally from the charted evidence and verified against recognised principles of plagiarism avoidance and detection [31–33].

4. Related Research Reviews: Scope, Results and Outputs

Before turning to individual strategies, it is useful to examine the earlier reviews on which any new synthesis must build. Table 2 collates fifteen reviews, giving their scope, principal results and the implication that this review draws from each.

Table 2. Related research reviews on value-based reform, their results and implications

Ref.	Review focus	Principal result	Implication for transition
[12]	Scoping review of VBHC implementation	Implementation components are heterogeneous; reported outcomes remain limited relative to the volume of descriptive activity	Standard definitions and outcome reporting are needed
[34]	Quality–cost association (systematic review)	No consistent relationship between higher quality and lower or higher cost across settings	Quality improvement does not automatically produce savings
[35]	Pay-for-performance and quality	Most included studies found at least partial positive effects, mainly on process measures, with weak study designs	Early optimism rested on limited evidence
[36]	Performance-based pay for individual practitioners	Weak and inconsistent evidence of improved patient care	Individual-level incentives are a blunt instrument
[37]	Review of systematic reviews of pay-for-performance	Effects are modest, concentrated in measured processes, and context-dependent	Design details matter more than the label
[38]	Financial incentives in primary care (Cochrane)	Evidence insufficient to establish reliable effects	Primary-care incentives need robust evaluation
[39]	Pay-for-performance, health and process outcomes	Little evidence of improved patient health outcomes; some process gains	Measurement of outcomes, not processes, is essential
[40]	Hospital pay-for-performance (Cochrane)	Effects on mortality and other outcomes are uncertain, with low-certainty evidence	Hospital programmes should not be assumed beneficial
[41]	UK Quality and Outcomes Framework	Improved recorded processes of care; effects on outcomes less clear	Large incentives can shift documented practice
[42]	Bundled payment (systematic review)	Spending reductions, mostly in orthopaedic episodes, without consistent quality decline	Bundles work best for well-defined procedural episodes
[43]	Accountable care organisations	Modest reductions in spending and utilisation; mixed quality effects	Savings are real but limited
[44]	Global payments with quality incentives	Spending constraint is more reliable than quality improvement	Incentives for quality must be explicit
[45]	Measuring success in value-based purchasing	Programme evaluation is hampered by weak measures and confounding	Evaluation design must precede roll-out

[46]	State of value-based purchasing programmes	Programmes proliferate, but with variable evidence of benefit	Alignment across payers is needed
[47]	European university hospital VBHC roadmap (consensus)	Sets out stepwise implementation recommendations	Organisational readiness is as important as payment

Two patterns emerge. First, reviews of payment instruments generally conclude that effects are modest and heterogeneous, and the more rigorous the design, the smaller the estimated benefit tends to be. The Cochrane reviews of financial incentives in primary care and of hospital pay-for-performance both concluded that the evidence was insufficient or of low certainty [38,40], and the review of systematic reviews similarly placed effects in the modest and context-dependent range [37]. Second, reviews from the organisational stream emphasise implementation process. The European consensus report presents VBHC adoption as a staged journey requiring governance, data and clinical engagement [47], and cross-system comparison confirms that national context determines which elements are feasible [48].

A third observation concerns the relationship between quality and cost. The systematic review of the quality–cost association found no uniform relationship, which means that any programme assuming that quality improvement will automatically lower spending, or that spending reduction will automatically leave quality intact, rests on an untested premise [34]. This finding justifies the insistence in VBHC on measuring both sides simultaneously.

5. Implementation Strategies

5.1 Payment-based strategies

5.1.1 Pay-for-performance and quality incentives. Early American pay-for-performance programmes layered bonuses onto fee-for-service payments for performance on selected measures. Early experience demonstrated how difficult it was to translate the concept into practice, with problems in measure selection, attribution, the size of incentives and the risk of rewarding already high performers [49]. The largest natural experiment in primary care is the UK Quality and Outcomes Framework. Analysis of its first years showed that incentivised activities improved quickly, but that improvement slowed once targets were reached, and that quality for non-incentivised activities was less favourable after the scheme began [50]. A later synthesis concluded that the framework shifted documented practice but that evidence of effects on population outcomes was limited [51]. The hospital sector produced comparable lessons. A long-term evaluation of the Premier hospital pay-for-performance demonstration found no lasting advantage in patient mortality for participating hospitals relative to comparators [52].

Behavioural economics has been invoked to explain why these results disappoint and to suggest redesign: incentives that are frequent, salient and framed as avoiding loss may be more potent than distant bonuses, and incentive design should anticipate crowding out of intrinsic motivation [68]. Whether such redesign delivers higher value remains an empirical question.

5.1.2 Hospital value-based purchasing and readmission penalties. The American Hospital Value-Based Purchasing programme converted a share of hospital payment into performance-linked adjustments. Evaluations using comparison groups found no meaningful improvement in clinical process measures or patient experience attributable to the programme [53], and an analysis of mortality in targeted conditions likewise found no association [54]. The Hospital Readmissions Reduction Program penalised excess readmissions for selected conditions. Readmissions declined, but part of the decline coincided with increased use of observation stays, which raised questions about whether patients were being managed differently or merely reclassified [55]. A subsequent study found that for heart failure and pneumonia, post-discharge mortality rose after the policy's introduction, while no such pattern was seen for acute myocardial infarction, which prompted concern about unintended harm [56]. These findings illustrate the central risk of narrowly specified penalties: providers optimise the measured quantity, and the system may not benefit.

5.1.3 Bundled and episode payments. Bundled payment fixes a price for an episode of care spanning several providers, encouraging coordination and the elimination of low-value services within the episode. The Dutch

experience with bundled payment for chronic disease demonstrated that integrated care can be financed through a single price for a care pathway, although it also exposed challenges in contracting and risk allocation [57]. In the United States, the analytic case for bundles anticipated cost savings from reducing variation in post-acute care [58]. Evaluation of voluntary participation in the Bundled Payments for Care Improvement initiative for lower-extremity joint replacement found lower episode payments with no deterioration in measured quality [59]. The mandatory Comprehensive Care for Joint Replacement model was subsequently evaluated over two years and found modest reductions in episode spending, achieved primarily by reducing the use of institutional post-acute care, without evidence of worse quality [60]. A randomised evaluation of the mandatory programme's first year similarly found reduced discharge to institutional post-acute care [61].

The evidence is less favourable beyond elective surgery. A national evaluation of bundled payments for medical conditions, where episodes are less predictable and driven by comorbidity, found less consistent evidence of savings [62]. The systematic review of bundled payment concluded that effects are strongest for procedural episodes and weakest where clinical variability is high [42]. This gradient is important for implementation: bundles should be targeted at conditions with clear boundaries, predictable resource use and meaningful variation in post-acute care.

5.1.4 Accountable care and shared-savings arrangements. Accountable care organisations accept responsibility for the cost and quality of care for a defined population and share in savings if spending falls below a benchmark. Early Medicare experience showed modest spending reductions, concentrated in organisations led by physician groups rather than hospitals [63], and a three-year follow-up of the Medicare Shared Savings Program confirmed that savings accrued mainly to physician-group ACOs, with little evidence of savings for hospital-integrated ACOs [64]. Evaluation of the Pioneer ACO programme reported lower spending growth than traditional fee-for-service and some improvements in measured care and patient experience [65]. The broader systematic review concluded that ACOs generate modest reductions in spending and utilisation, with mixed quality results [43]. A plausible interpretation is that organisations without a hospital revenue base to defend have fewer structural conflicts when reducing admissions.

5.1.5 Global budgets and comprehensive contracts. Global payment fixes a population-based budget and ties a portion of income to quality. The Massachusetts Alternative Quality Contract combined a global budget with substantial quality bonuses. In its first year it was associated with lower spending growth and improvements in chronic care management and paediatric care relative to comparison organisations [66], and its design principles and early stakeholder experience were described as a model of private-payer innovation [67]. A systematic review of programmes combining global payments with explicit quality incentives found that spending constraint was more reliably achieved than quality improvement, which suggests that quality incentives require deliberate design and cannot be assumed to follow from budget discipline [44].

5.2 Organisational and clinical strategies

5.2.1 Programme-level adoption of VBHC. A longitudinal interview study at a Swedish university hospital that adopted value-based management documented a pattern familiar to implementation scientists: early enthusiasm and strong central sponsorship, followed by difficulty translating organisational ambition into clinical routines, and tensions between managerial and professional logics [69]. European consensus work reached similar conclusions, recommending that organisations sequence adoption, starting with condition selection, outcome measurement and multidisciplinary teams, before attempting payment redesign [47]. Cross-system analysis shows that identical conceptual frameworks are translated differently according to payer structure, professional autonomy and data infrastructure [48].

5.2.2 Leadership, learning and culture. A transition from volume to value changes what leaders must do. They must manage cross-boundary pathways, tolerate short-term financial dips, and sustain a learning culture in which variation is examined openly. Analyses of crisis leadership in healthcare emphasise organisational learning from failures, and the lesson transfers to transitions in which early pilots frequently underperform [70]. Work on embedding trauma-informed approaches in healthcare leadership argues that culture and psychological safety shape patient outcomes, which is consistent with the VBHC expectation that outcomes depend on how teams function [71]. Strategic human capital and learning-and-development analyses likewise highlight the importance of investing in workforce capability when organisations change their operating model [72]. Although these sources are not evaluations of payment reform, they are relevant to the organisational capacity that reform requires.

5.2.3 Measurement, costing and data infrastructure. Value cannot be managed without data. A value-driven outcomes programme at an American academic system built a platform that exposed variation in cost and outcomes at clinician and pathway level, and was associated with reduced cost and improved quality [73]. Time-driven activity-based costing applied across multiple institutions identified specific process redesign opportunities that were invisible to conventional accounting [74]. Multinational use of disease registries has shown that outcome data, especially where linked to feedback, reveal variation in results that would otherwise remain hidden and can support improvement [75]. The practical lesson is that registries and cost systems are not optional extras but the precondition of a value-based strategy.

The same infrastructure carries a cost. Medical practices in the United States were estimated to spend billions of dollars annually simply reporting quality measures [76], and analysis of billing and insurance-related activities in one academic system quantified the administrative cost associated with navigating payer-specific requirements [77]. If every payer introduces its own metrics, the burden of measurement can erode the efficiency gains the reform is meant to deliver. Harmonised, outcome-focused measure sets are therefore a design requirement.

5.2.4 Clinical redesign and the care environment. Value-based reforms ultimately depend on changes in how care is delivered. Evidence-based design of the physical environment and educational interventions have been analysed as determinants of healthcare outcomes [78], and strategies to reduce hospital-acquired infections represent a classic value lever, because preventing harm reduces both suffering and cost [79]. Smart facility management using machine learning has been proposed to improve operational performance in healthcare settings, which may free resources for patient-facing activities [80].

5.2.5 Digital and AI-enabled strategies. Digital transformation is frequently presented as an enabler of value-based care. A systematic review of digital transformation in hospital management examined its effects on management practice [28], and analyses of AI-driven patient engagement consider how personalised communication might support self-management and adherence [81]. Artificial intelligence in diagnostic medicine has been examined as a way of improving accuracy and efficiency [82], and AI-based prediction of antimicrobial resistance patterns has been proposed to support precision stewardship, which is directly relevant to avoiding wasteful or harmful prescribing [84]. Telemedicine adds a further channel for access, though its benefits depend on equitable availability across socioeconomic groups [83]. Digital strategies therefore expand the feasible set of value interventions but also introduce equity and governance risks, which are discussed in Section 8.

6. Outcomes: Comparative Evidence

6.1 Cost and utilisation

Across instruments, the typical finding is modest savings. Bundled payments for orthopaedic episodes yielded small reductions in spending, driven by less use of institutional post-acute care [59–61]. Accountable care and shared-savings programmes reduced spending by small amounts, with larger savings among physician-led organisations [63,64]. Global-budget contracts constrained spending growth in the Massachusetts example [66]. Pay-for-performance programmes, by contrast, were not primarily designed to reduce cost, and their cost effects are unclear [39,52]. The central message for payers is that value-based reforms are unlikely to deliver dramatic short-term savings, and that estimates of net savings must account for bonus payments and administrative expenditure.

6.2 Clinical quality and patient outcomes

The quality picture is more mixed. Process measures often improve when incentivised [35,50], but improvements in patient outcomes are rarely demonstrated, as shown by evaluations of hospital value-based purchasing and long-term evaluations of pay-for-performance [52–54]. Bundled payments for joint replacement did not show measurable quality deterioration [59,60], which is reassuring but not equivalent to demonstrating improvement. The finding of increased post-discharge mortality for some conditions after readmission penalties introduced a note of caution about the potential for unintended harm [56].

6.3 Patient experience and workforce

Evidence on patient experience is thin. Hospital value-based purchasing did not improve measured patient experience [53], and VBHC proponents argue that existing experience surveys do not capture outcomes patients

value most [20]. On the workforce side, the quadruple-aim literature warns that programmes which add documentation and reporting burdens risk worsening clinician burnout [17,19], and the estimated expenditure on quality-reporting activity indicates the scale of the burden [76].

6.4 Equity outcomes

Equity is where the evidence is most worrying. Hospitals penalised under the readmissions programme were disproportionately large, teaching and safety-net institutions that serve more complex and socially disadvantaged patients [85]. Analysis of the Hospital Value-Based Purchasing programme found that safety-net hospitals were more likely to fare poorly [86], and evaluation of the physician value-based payment modifier showed that practices caring for medically and socially complex patients tended to perform worse on measures, raising concern that unadjusted programmes may transfer resources away from those with greatest need [87]. Regional socio-legal scholarship on health disparities in Punjab similarly documents structural inequities and legislative gaps that would shape how any outcome-based system performs in an Indian state context [88]. The implication is that risk adjustment, including social risk, is a precondition for fair value-based payment, and that equity measures should be built in from the beginning.

6.5 Comparative summary

Table 3. Comparative synthesis of payment and organisational models: outcomes, strength of evidence and risks

Model	Representative evidence	Cost/utilisation	Quality/outcomes	Equity and unintended effects	Evidence strength
Pay-for-performance (process and outcome bonuses)	[35,39,40,49–52]	Unclear or neutral	Process gains; outcome gains rare	Gaming, narrowing of attention, neglect of non-incentivised care	Moderate, mostly low-certainty
Hospital value-based purchasing and readmission penalties	[53–56,85,86]	Small	No consistent improvement; possible harm in subgroups	Disproportionate penalties for safety-net hospitals	Moderate, observational
Bundled payments	[42,57–62]	Modest savings in orthopaedics	No quality decline in joint replacement	Risk selection; less effective medical conditions	Moderate to strong for elective surgery
Accountable care and shared savings	[43,63–65]	Modest savings; better in physician-led ACOs	Mixed	Benefit for vulnerable groups uncertain	Moderate
Global budgets with quality incentives	[44,66,67]	Reliable spending constraint	Improvements in selected measures	Dependence on risk adjustment	Moderate
Organisation-level VBHC (outcome and cost measurement, pathways)	[47,48,69,73–75]	Case-level improvements	Documented in single-site and registry examples	Measurement burden; depends on leadership	Low to moderate, largely descriptive

A comparison across rows is instructive. The instruments with the strongest evidence (bundles for elective surgery) are those with the clearest episode boundaries and the most predictable resource use, while the

instruments with the most ambitious claims (broad pay-for-performance) have the weakest evidence of outcome benefit. Organisation-level VBHC has the weakest causal evidence but arguably addresses the most fundamental determinants of change, namely measurement, clinical engagement and learning.

7. Comparative Perspectives across Health Systems

7.1 United States

The American system has been the principal laboratory for payment reform because of its fragmented payer structure, high spending and federal purchasing power. Experience there illustrates both the potential and the limits of financial alignment. Large programmes have shifted substantial payment volume toward alternative models [6], yet the evidence reviewed above suggests that savings are modest, quality effects mixed and equity risks real [43,46,86]. The multiplicity of payers, each with distinct measures, creates substantial reporting burden [46,76].

7.2 United Kingdom

The English system, with a single national purchaser, implemented the Quality and Outcomes Framework in primary care and has debated outcome-based commissioning. The framework improved recorded processes of care but evidence of broader outcome gains was limited, and its incentives slowed once targets were met [41,50,51]. English experience also highlights a conceptual lesson: before value can be commissioned, the definition of health must be agreed [21].

7.3 The Netherlands

Dutch reforms combined regulated competition with bundled payments for chronic disease and a strong tradition of outcome registries, which allowed the integration of chronic care into single-price pathways [57]. The Dutch approach demonstrates that bundling can be implemented in primary care, but it also shows the difficulty of contracting, risk allocation and the attribution of multimorbid patients [48,57].

7.4 Sweden

Sweden is distinguished by its national quality registries and by hospital-level adoption of value-based management. Multinational registry analysis highlighted the capacity of outcome data to reveal variation and drive improvement [75], and the longitudinal case study of a Swedish university hospital documented both the promise and the cultural friction of adoption [69]. The Swedish example suggests that data infrastructure and clinical ownership precede payment reform, whereas the American example demonstrates the reverse sequence, and that the Swedish sequence may be more robust.

7.5 India and other low- and middle-income settings

India's context differs fundamentally. Public spending has been low relative to need, out-of-pocket payment is high, and the system includes large private and informal sectors [9,10]. The national insurance programme launched in 2018 provides hospital coverage for a large proportion of the population and is an example of strategic purchasing, which creates an opportunity to build value-based features such as outcome tracking and package pricing into a large-scale purchaser [89]. Because the disease burden is heterogeneous, with simultaneous communicable, non-communicable and injury-related burdens, any outcome-based programme will need conditions and measures tailored to local epidemiology [7,8]. Health legislation can strengthen national health systems by establishing the legal basis for financing, accountability and data governance, and a policy-legal perspective is therefore essential for implementation [90]. System resilience also matters: climate-related disasters such as floods impose direct and indirect health consequences and expose healthcare infrastructure to vulnerability, which can destabilise outcome measurement and financing in affected regions [91]. In low- and middle-income settings generally, the argument for quality-focused reform is reinforced by the evidence that poor-quality care is a major driver of avoidable mortality [11].

Preventive and integrative approaches deserve a brief note. Meta-analytic and clinical studies of yoga in cardiovascular health and in the treatment of depression have been reported in regional scholarship [92,93].

Where such interventions demonstrate clinical benefit at low cost, they are logical candidates for inclusion in value-based pathways, provided that outcome evidence meets the same standards applied to conventional interventions.

7.6 Cross-system synthesis

Three generalisations follow. First, no jurisdiction has achieved a transition through payment reform alone. Second, systems with strong registries and unified purchasers appear better positioned to evaluate and refine reforms. Third, in systems with high private provision and weak data infrastructure, the sequencing should begin with measurement and legal frameworks, and not with complex risk-bearing contracts.

8. Analytical Discussion: Stakeholder Perspectives, Mechanisms and Ethics

8.1 Stakeholder perspectives

Patients. The central promise of VBHC is outcomes that matter to patients. In practice, patients experience the transition through changes in access, choice and communication. Where outcome measurement is built with patient input, it can inform shared decisions [20]. Where it is not, patients may experience restrictions in care without perceptible benefit. For people with complex long-term conditions, outcomes are multidimensional and may be poorly captured by standard measures, so patient-centred definitions are essential [22].

Clinicians. Clinicians are asked to accept accountability for outcomes that depend partly on factors beyond their control, and to engage in measurement activities that consume time. The literature on burnout and the quadruple aim cautions that programmes ignoring this burden risk undermining the workforce on which value depends [17,19]. Conversely, clinicians often respond positively to outcome feedback that is credible, risk-adjusted and used for learning and not for punishment, as registry and value-driven outcome examples suggest [73,75].

Providers and managers. Hospitals face a transitional dilemma, sometimes described as operating with one foot in each canoe: they must maintain revenue under fee-for-service while investing in capabilities that reduce volume. This explains why hospital-integrated ACOs have performed less well than physician-led ones [63,64], and why transitional financing and shared-risk corridors are recommended features of reform. Leadership, organisational learning and culture determine whether this dilemma is managed strategically [23,70–72].

Payers and policymakers. Payers seek savings and accountability, but face a trade-off between simple, administratively light measures and sophisticated, outcome-based measures that require data infrastructure. The evidence supports a staged approach, starting with well-defined episodes and robust measurement, then extending to population-based models as capabilities mature [42,47].

Equity advocates. From an equity perspective, the transition is justified only if it narrows rather than widens disparities. Evidence that safety-net providers have been disadvantaged by unadjusted programmes [85–87] strengthens the case for explicit equity safeguards, in line with the fifth aim [18].

8.2 Mechanisms: why effects are modest

Several mechanisms help explain why value-based reforms yield smaller effects than advocates anticipated. The first is **incentive dilution**. When a value-based payment represents a small share of revenue, the dominant incentive remains volume [49,52]. The second is **measurement narrowing**. Providers respond to what is measured, which can improve incentivised processes while neglecting others [50]. The third is **attribution and risk**. Providers cannot control all determinants of outcome, so risk-bearing contracts expose them to randomness and to the consequences of patients' social circumstances [87]. The fourth is **capability deficit**. Without cost-accounting, registries and analytic skill, organisations cannot identify where value can be created [73–75]. The fifth is **administrative friction**. Multiple payers and measures multiply reporting cost [76,77]. The sixth is **context dependency**. Identical instruments perform differently in different market structures, as the contrast between physician-led and hospital-led ACOs and between national systems illustrates [48,63,64].

8.3 Digital technology, algorithmic bias and ethics

Digital tools can reduce the cost of measurement, personalise patient engagement and support diagnosis and stewardship [81,82,84]. They also introduce risks. Scholarship on algorithmic bias argues that artificial intelligence systems can reproduce and amplify social stratification when trained on unrepresentative data [94]. In a value-based system, an algorithm used for risk adjustment, patient selection or resource allocation could entrench disparities if bias goes undetected. Telemedicine illustrates the same tension, because it may widen access, yet its outcomes depend on equitable access across socioeconomic groups [83]. Stigma is a further barrier to outcome-oriented care. A study of cancer-related stigma among tertiary students in Punjab demonstrates how social attitudes can suppress help-seeking and delay care [95], which would distort outcome measurement if unrecognised. Ethical governance of data, transparent algorithms and community engagement are thus necessary conditions for legitimate value-based reform [30].

8.4 Integrative framework

The evidence suggests an integrative framework with four interacting levers. The **financial lever** comprises payment design that rewards outcomes and shares risk prudently. The **organisational lever** includes leadership, culture, care-pathway redesign and workforce wellbeing. The **measurement lever** includes outcome registries, patient-reported measures, cost accounting and harmonised reporting. The **equity and governance lever** includes risk adjustment, legal frameworks, algorithmic accountability and community engagement. The review's central analytical claim is that these levers are complements. A financial lever pulled without the measurement lever produces gaming, and measurement without the organisational lever produces dashboards without improvement, while any of the three without the equity lever risks harming those with least power.

9. Implications for Policy and Practice

For payers and governments. First, sequence reform. Begin with episodes that have clear boundaries and well-established savings potential, as the orthopaedic bundle experience suggests, and expand to complex and chronic conditions only when measurement capacity permits [42,60]. Second, harmonise measures across payers to contain reporting costs [46,76]. Third, adopt risk adjustment that includes social risk and monitor equity outcomes prospectively, since unadjusted programmes have penalised safety-net providers [85–87]. Fourth, provide transitional financing so that providers who reduce volume are not financially punished before new revenue models mature [63,64].

For health-system leaders. Invest in cost-accounting and outcome measurement before assuming risk [73–75]. Build clinical leadership of condition-specific teams, and treat the transition as an organisational learning process in which early failures are examined candidly [47,69,70]. Protect the workforce by minimising non-productive documentation and by monitoring burnout as an outcome in its own right [17,19].

For low- and middle-income settings. Use large purchasers, such as national insurance schemes, as vehicles for introducing outcome tracking and package pricing [89]. Establish legal foundations for data governance and accountability [90]. Tailor outcome sets to local epidemiology [7,8], and consider resilience to shocks that can disrupt both service delivery and measurement [91].

For researchers. Evaluation should be designed alongside reform, using comparison groups and pre-trend analysis. Studies should report equity and workforce outcomes routinely, harmonise outcome definitions, and examine long-term effects beyond the first one or two years [45]. Implementation research should document the organisational conditions in which instruments succeed [12].

10. Limitations

This review has several limitations. First, no live multi-database search was conducted, and the corpus was assembled purposively. This could introduce selection bias, notably toward English-language and high-income-country evidence, and the PRISMA flow therefore describes a defined corpus rather than a comprehensive search of the literature. Second, the heterogeneity of interventions, comparators and outcomes precluded meta-analysis, so conclusions rest on narrative synthesis and are vulnerable to interpretive judgement. Third, many evaluations are observational and subject to confounding, secular trends and selective participation. Fourth, the regional and thematic sources drawn from the supplied library were cited at the level of their stated topics and are not

equivalent in evidential weight to controlled evaluations. Fifth, the evidence base is time-limited: programmes evolve rapidly, and the most recent changes may not yet be evaluated. Readers should treat the conclusions as an analytical map of the current evidence and not as a definitive effect estimate.

11. CONCLUSION

The transition from volume-based to value-based healthcare is a necessary response to a payment logic that rewards activity regardless of results. After more than a decade of experimentation, the evidence supports cautious optimism and sober realism. Bundled payments for well-defined surgical episodes, accountable care in physician-led organisations, and global budgets with deliberate quality incentives have produced modest savings without demonstrable harm to measured quality. Pay-for-performance and hospital value-based purchasing, by contrast, have delivered limited improvement in patient outcomes and have sometimes burdened providers who serve the most vulnerable.

The deeper conclusion is that value-based healthcare is a system of mutually dependent reforms and not a single policy. Payment redesign matters, but its effects are conditional on measurement infrastructure, organisational leadership, workforce wellbeing and equity safeguards. Systems that treat the transition as a payment problem will tend to be disappointed, whereas those that treat it as an integrated programme of financial alignment, data capability, clinical engagement and fairness are more likely to improve outcomes per unit of cost. For countries such as India, where the disease burden is large and heterogeneous and purchasing capacity is growing, the opportunity lies in building these foundations at scale before financial risk is transferred. The research agenda that follows is clear: better-designed evaluations, routine reporting of equity and workforce outcomes, and implementation studies that explain not only whether value-based reforms work but under what conditions.

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