



Rethinking Academic Hospital Remuneration Through Value Chain-Based Hybrid Gainsharing: A Scoping Review

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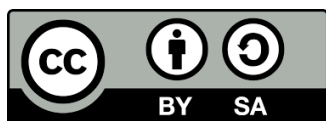
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Abstract

Academic hospitals integrate clinical care, education, research, and innovation; however, conventional remuneration systems often prioritize clinical productivity while undervaluing academic contributions. This study aimed to map the existing evidence on remuneration models and propose an integrated framework aligning professional contributions with institutional value creation. A scoping review was conducted using PubMed to identify English-language publications from 2010 through August 2026, supplemented by reference list screening and targeted source verification. Records were screened using Rayyan, relevant data were extracted into a structured matrix, and findings were synthesized thematically in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). Of the 142 records identified, 29 studies published between 2008 and 2026 were included. Four thematic domains emerged: academic remuneration, hybrid gainsharing, value-based payment, and organizational performance. Existing remuneration models addressed educational contributions, efficiency gains, quality accountability, and institutional sustainability separately, without comprehensively integrating these dimensions across the academic hospital value chain. The proposed framework incorporated fixed remuneration, individual clinical and academic performance incentives, team-based gainsharing, and organization-wide gainsharing, supported by safeguards for healthcare quality, patient safety, equity, academic responsibilities, financial affordability, and institutional sustainability. These findings suggested that multidimensional incentive structures could strengthen alignment between professional performance and institutional missions while reducing excessive dependence on clinical productivity metrics. The proposed framework provided a conceptual foundation for remuneration reform in Indonesian academic hospitals; however, stakeholder consultation, empirical validation, and financial simulations were necessary before its practical implementation.



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INTRODUCTION

Healthcare payment and workforce management systems are increasingly shifting from volume-based arrangements toward models that align professional performance with healthcare quality, patient outcomes, affordability, and institutional sustainability. Remuneration plays a central role in this transition because compensation structures determine which professional contributions are recognized, measured, and rewarded. In hospitals, fixed salaries and productivity-based incentives can promote financial stability and individual accountability;

however, they may also emphasize billable clinical activities while undervaluing nonbillable contributions essential to long-term organizational performance and value creation.

Academic hospitals face particularly complex challenges in aligning remuneration with their institutional missions. Their responsibilities extend beyond clinical service delivery to encompass education, research, innovation, knowledge dissemination, and organizational development. Indonesian regulations similarly recognize teaching hospitals as institutions that integrate healthcare services, education, and research, while more recent provisions governing clinical educators acknowledge clinical services, education, research, and community engagement as interconnected professional responsibilities (Indonesia, 2018, 2024). These responsibilities compete for professional time and institutional resources, yet conventional remuneration systems rarely assign comparable value to contributions across these different missions.

The work relative value unit (wRVU) remains a widely used measure of clinical productivity, particularly in physician compensation systems. However, remuneration models based primarily on wRVUs may inadequately recognize teaching, clinical supervision, mentoring, curriculum development, research, administrative responsibilities, and quality improvement activities. Consequently, academic compensation literature has introduced educational value units (EVUs), academic relative value units, protected academic time, mission-based salary support, and blended salary–incentive arrangements to improve the recognition and compensation of nonclinical contributions (D’Angelo & Gallagher, 2016; Gottlieb et al., 2023; Husain et al., 2023; Mehan et al., 2019). Evidence from surgical and pediatric specialties further suggests that compensation structures should balance clinical productivity with institutional missions, compensation equity, transparency, recruitment, retention, and interdisciplinary teamwork (Evans & Mayer, 2024; Lakshminrusimha et al., 2023; Slater et al., 2022).

A complementary body of literature has examined gainsharing and value-based payment mechanisms. Gainsharing involves distributing a portion of verified efficiency-related financial gains among clinicians or teams whose contributions help generate those gains. Hospital–physician gainsharing arrangements have been associated with cost reductions without measurable deterioration in healthcare access or quality in certain settings, although their applicability depends on governance arrangements, appropriate attribution of savings, and effective safeguards (Ketcham & Furukawa, 2008). Shared savings arrangements, global budgets, bundled payments, and pay-for-performance models extend this incentive-based approach by linking financial rewards to efficiency, care coordination, and quality improvement. Nevertheless, their effectiveness depends substantially on performance indicator selection, provider behavioral responses, risk adjustment, and organizational capacity for implementation (D. R. Arnold, 2017; Cattel & Eijkenaar, 2020; Yordanov et al., 2024).

Value-based payment further emphasizes the relationship between patient outcomes and the resources required to achieve them. Existing literature suggests that payment reforms are more comprehensive when healthcare quality, costs, patient outcomes, and provider accountability are evaluated collectively rather than through isolated financial indicators (Chee et al., 2016; Leão et al., 2023; Ryan-Stewart et al., 2018). However, value-based payment models have primarily focused on clinical service delivery and payer–provider relationships.

Consequently, these arrangements do not inherently account for the institutional value generated through academic activities, including education, research, and innovation.

The value chain perspective provides a conceptual foundation for integrating these previously fragmented remuneration approaches. Porter's value chain framework conceptualizes organizational value creation as the outcome of interconnected primary and supporting activities rather than isolated organizational outputs (Porter, 1985). Within academic hospitals, this perspective encompasses clinical care, education, research, innovation, and knowledge translation, supported by governance, workforce capabilities, information systems, financial management, infrastructure, and institutional partnerships. A remuneration framework informed by the value chain perspective should therefore recognize the interdependence of individual, team, and organizational contributions across these activities rather than relying exclusively on revenue generation or clinical service volume.

The Indonesian regulatory context further reinforces the relevance of developing an integrated remuneration framework. The regulatory framework governing Badan Layanan Umum (BLU; Public Service Agencies) establishes remuneration principles related to proportionality, equity, appropriateness based on job value, and performance. It accommodates salary, fixed allowances, performance incentives, achievement bonuses, and other remuneration components while linking compensation to performance agreements and requiring consideration of institutional financial capacity and governance arrangements (Regulation of the Minister of Finance Number 172 of 2023 Concerning Application of the Arm's Length Principle in Transactions Influenced by Special Relationships, 2023). These provisions establish a relatively flexible remuneration structure. However, the reviewed regulations do not explicitly prescribe a value chain-based hybrid gainsharing model for academic hospitals or provide a specific mechanism for translating teaching, supervision, research, and innovation activities into remuneration components. This interpretation represents a policy-based inference from the reviewed regulatory provisions rather than evidence that all Indonesian academic hospitals implement identical compensation arrangements.

Existing research has therefore developed across several complementary but largely separate domains. Academic incentive models emphasize the recognition of teaching and scholarly contributions; individual compensation systems address productivity, fairness, and professional accountability; gainsharing mechanisms distribute verified efficiency gains; value-based payment models incorporate quality and patient outcome measures; and organizational remuneration arrangements connect financial rewards with institutional performance. Within the literature identified in this review, no comprehensive framework was found that systematically integrated these dimensions across the academic hospital value chain. Accordingly, this scoping review aimed to map the available evidence and propose a Value Chain-Based Hybrid Gainsharing Remuneration Framework as a conceptual foundation for subsequent empirical validation, financial simulation, and policy development in academic hospitals.

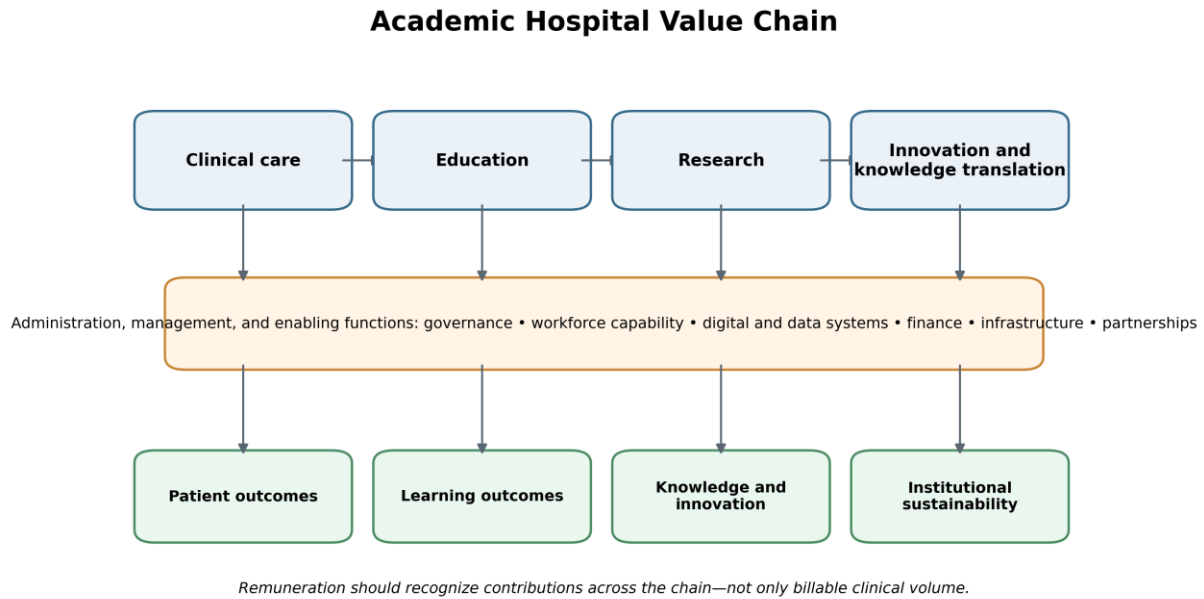


Figure 1. Academic hospital value chain and multidimensional outputs. Clinical care, education, research, and innovation are supported by administration, management, governance, workforce capability, digital and data systems, finance, infrastructure, and partnerships. The figure is an original conceptual synthesis developed by the authors.

METHOD

This study employed a scoping review design to map concepts, remuneration models, and evidence relevant to academic hospitals. The review followed established scoping review methodology and was reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Al-Aqeel et al., 2026; Arksey & O'Malley, 2005; Levac et al., 2010; Tricco et al., 2018). This approach was selected to examine the scope, conceptual relationships, and gaps in the available evidence.

The final PubMed search was conducted in August 2026 using six concept blocks: (1) remuneration, compensation, incentives, pay-for-performance, and gainsharing in academic or teaching hospitals; (2) educational value units (EVUs); (3) faculty or academic compensation; (4) gainsharing and shared savings in hospitals or healthcare settings; (5) value-based payment or value-based healthcare combined with compensation or incentives; and (6) organizational or hospital performance combined with compensation or incentives. The search blocks were combined using the Boolean operator OR to maximize retrieval sensitivity. The database search was restricted to English-language publications published between 2010 and August 2026. Backward reference screening and targeted source verification were conducted to identify additional relevant publications, including a foundational gainsharing study published before 2010. The search concept blocks are presented in Table 1.

Studies were included if they examined remuneration, compensation, academic productivity, educational value units (EVUs), academic relative value units (aRVUs), gainsharing, shared savings, pay-for-performance, value-based payment, or organizational performance relevant to healthcare workforce incentives or hospital remuneration design. Eligible settings included academic medical centers, teaching hospitals, medical schools,

integrated healthcare organizations, provider networks, and healthcare payment policy initiatives. Editorials lacking substantive analysis, conference abstracts, study protocols, nonhealthcare studies, clinical studies without remuneration or payment components, and publications with insufficient information to establish their relevance were excluded.

Records were imported into Rayyan for screening. The first author screened titles and abstracts against predefined eligibility criteria and assessed potentially eligible full-text publications. No duplicate records were identified in the PubMed export. Six supplementary records identified through reference screening and targeted verification were manually checked against the database records to prevent duplication. All 29 potentially eligible reports were retrieved in full text, assessed for eligibility, and included in the review. Data were extracted into a structured matrix comprising publication characteristics, study setting, research design, objectives, remuneration or payment models, model components, principal findings, and contributions to the proposed framework. The second author provided methodological supervision and reviewed the completed manuscript.

The extracted data were summarized descriptively and analyzed using thematic synthesis. Initial codes were developed from the remuneration concepts identified in the included studies and subsequently organized into four thematic domains: academic remuneration, hybrid gainsharing and pay-for-performance, value-based payment and value-based healthcare, and organizational performance. Cross-domain comparisons were conducted to identify gaps in existing remuneration approaches and inform the development of the proposed integrated framework. A formal risk-of-bias assessment was not performed because the review focused on mapping existing concepts, models, and evidence rather than estimating the comparative effectiveness of specific interventions.

Table 1. Concept blocks used to construct the PubMed search strategy.

Block	Core terms	Purpose
A	(remuneration OR compensation OR incentive* OR "pay-for-performance" OR gainsharing) AND ("academic hospital" OR "teaching hospital" OR "academic medical center")	General academic-hospital remuneration
B	"educational value unit" OR EVU OR "educational relative value unit" OR eRVU	Academic and teaching contribution
C	("faculty compensation" OR "academic compensation") AND (physician OR faculty)	Faculty compensation
D	(gainsharing OR "shared savings" OR "gain sharing") AND (hospital OR healthcare)	Shared organizational gains
E	("value-based payment" OR "value-based healthcare") AND (compensation OR remuneration OR incentive*)	Value-oriented incentives
F	("organizational performance" OR "hospital performance") AND (compensation OR remuneration OR incentive*)	Institutional performance alignment

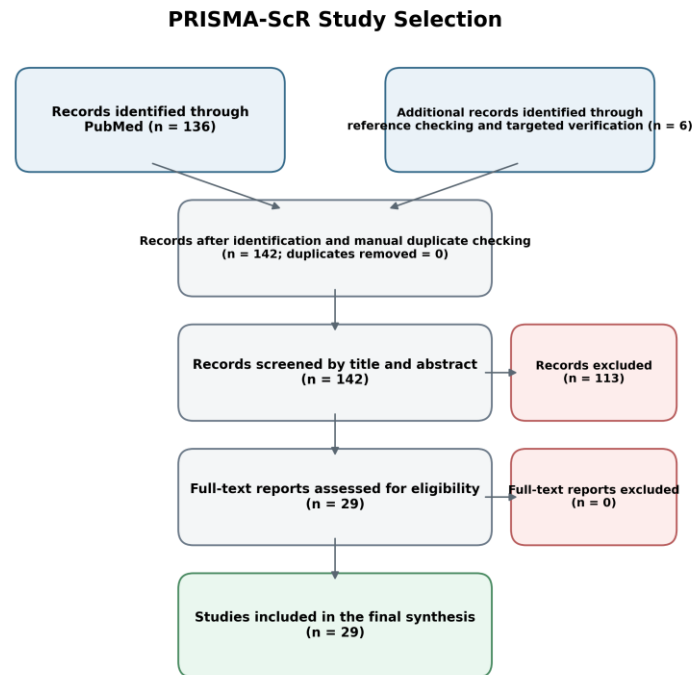


Figure 2. PRISMA-ScR flow diagram. The final evidence set comprised 136 records identified through PubMed and 6 supplementary records identified through reference checking and targeted verification.

RESULTS AND DISCUSSION

Study selection and evidence profile. PubMed yielded 136 records, and 6 supplementary records were identified through backward reference checking and targeted verification. No duplicates were identified. After 142 records were screened by title and abstract, 113 were excluded. Twenty-nine full-text reports were assessed, and all met the eligibility criteria; therefore, no reports were excluded at the full-text stage. The 29 included studies were published from 2008 to 2026. Twenty-one studies were from the United States (72.4%), 5 synthesized international evidence (17.2%), and 3 were international reviews with evidence dominated by the United States (10.3%). Seventeen publications were evidence syntheses or reviews, 7 were empirical or implementation-oriented studies, and 5 were conceptual, policy, or perspective papers. The predominance of US evidence reflects the maturity of faculty compensation and value-based payment initiatives in American academic medical centers, but it also limits direct transferability to other financing and employment systems.

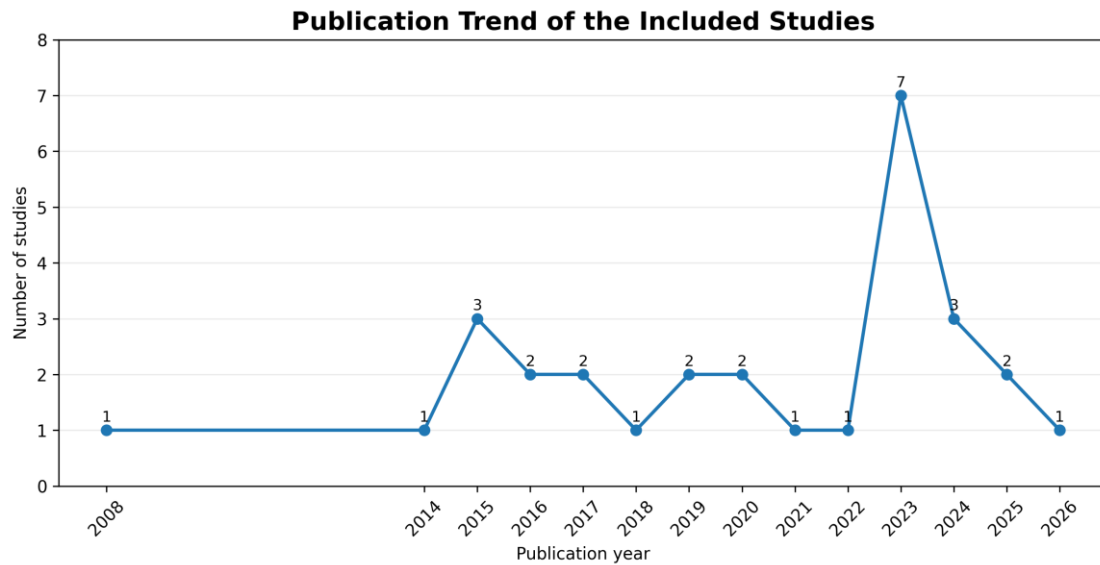


Figure 3. Publication trend of the 29 included studies. The largest concentration of publications occurred in 2023, reflecting increased attention to Educational Value Units, academic compensation, and value-based payment design.

Table 2. Characteristics of the included evidence.

Characteristic	Category	n (%)
Region	United States	21 (72.4)
Region	International	5 (17.2)
Region	International / US-dominant	3 (10.3)
Design family	Evidence synthesis / review	17 (58.6)
Design family	Empirical / implementation	7 (24.1)
Design family	Conceptual / policy / perspective	5 (17.2)
Theme	Academic remuneration	11 (37.9)
Theme	Hybrid-gainsharing / P4P	7 (24.1)
Theme	Value-based payment / VBHC	7 (24.1)
Theme	Organizational performance	4 (13.8)

Academic remuneration and the invisible academic mission. Academic remuneration was the largest domain (n=11). EVU and academic RVU systems were developed because clinical productivity measures omit teaching, supervision, mentoring, curriculum work, research, administration, and academic citizenship. Reviews by (Husain et al., 2023), (Gottlieb et al., 2023), and (Beck Dallaghan et al., 2023) showed substantial diversity in point values, governance, funding, and eligible activities, yet the underlying function was consistent: to make academic effort visible and negotiable. Implementation studies reported improved transparency, distribution of teaching workload, faculty engagement, or recognition of educational effort (Butani & Plant, 2021; House et al., 2015). Monetary rewards were not always the sole mechanism; recognition, protected time, departmental accountability, and alignment with institutional priorities also mattered. These findings support an academic incentive layer but caution against treating all academic products as interchangeable points. Indicator design should reflect strategic priorities, effort, quality, and disciplinary context.

Compensation architecture, fairness, and mission alignment. Faculty compensation papers emphasized that an effective model requires more than an EVU schedule. Base salary,

clinical full-time equivalent, job and rank expectations, recruitment, retention, pay equity, transparency, teamwork, and good-standing criteria form the architecture within which variable incentives operate (Evans & Mayer, 2024; Lakshminrusimha et al., 2023). (Mehan et al., 2019; Slater et al., 2022) argued that academic performance metrics can balance the pressure of wRVU productivity, but the model must remain understandable, administratively feasible, and financially neutral or sustainable. Compensation trends also revealed persistent differences by rank, sex, and race or ethnicity, indicating that performance incentives should be audited for distributional equity rather than assumed to be fair by design (Malhotra et al., 2025).

Hybrid-gainsharing and shared accountability. Seven studies contributed to the hybrid-gainsharing/pay-for-performance domain. Gainsharing aligns hospital and clinician incentives by returning part of verifiable savings to those who contribute to efficiency. In cardiology, (Ketcham & Furukawa, 2008) reported lower costs without evidence of reduced access or quality on available measures, although most savings came from lower prices rather than reduced utilization. Global and episode-based payment literature similarly described opportunities for team-based coordination and service-line accountability (Chen & Guo, 2023; Hudson, 2015). The broader evidence shows that incentives must specify the baseline, attribution rules, eligible costs, quality safeguards, distribution formula, and timing of payment. Without these features, shared savings may reward factors outside professional control or encourage underuse.

Behavioral and governance risks. Pay-for-performance and gainsharing can create countervailing incentives. Professionals may focus on measured activities, avoid complex patients, game documentation, or experience diminished intrinsic motivation when incentives are perceived as unfair or externally imposed (F. W. Arnold et al., 2013; Martin et al., 2020). (Yordanov et al., 2024) found that integrated-care incentives are more credible when financial design is supported by collaboration, information sharing, and governance. Therefore, the proposed framework treats quality, equity, patient safety, academic mission, and financial sustainability as gates rather than optional indicators. Gains should be distributable only after minimum safeguards are achieved.

Value-based payment as an outcome gate. Seven studies addressed value-based payment or value-based healthcare. The evidence describes a transition from fee-for-service toward payment that incorporates quality, outcomes, cost awareness, and accountability, but program effects remain heterogeneous (Chee et al., 2016; Joynt Maddox et al., 2017; Leão et al., 2023). Clear service definitions, valid indicators, data infrastructure, risk adjustment, and stakeholder engagement are recurrent requirements. Ryan and Rodgers (2018) emphasized that neither quality nor spending alone represents value. (Sandhu et al., 2023) similarly highlighted indicator validity and risk adjustment for clinician-level payment. This review therefore positions value-based measures as modifiers and eligibility gates for gainsharing rather than as a single replacement for all remuneration components.

Organizational performance and sustainability. Four studies focused principally on organizational performance. Academic medical centers must sustain clinical, educational, and research missions while responding to financial pressure and population-health accountability (Gourevitch, 2014; Sabeti et al., 2015). Executive compensation evidence shows that the metrics selected by governing bodies matter: size and profitability may receive stronger rewards than community benefit if the incentive contract is not intentionally balanced (Jenkins et al.,

2024). Organizational performance in academic hospitals should therefore extend beyond revenue, activity, or surplus to include quality, academic outputs, employee engagement, innovation, population health, and governance.

Table 3. Thematic synthesis and implications for framework development.

Theme (n)	Evidence mapped	Main synthesis	Framework implication
Academic remuneration (11)	EVU/aRVU, faculty compensation, academic physician remuneration	Teaching, supervision, research, and academic service are undercounted by clinical productivity metrics.	Add a measurable academic contribution layer with transparent governance.
Hybrid-gainsharing / P4P (7)	Gainsharing, shared savings, global and bundled payments, P4P	Team incentives can improve alignment and efficiency but require attribution rules and safeguards.	Create service-line and organizational gainsharing pools after quality gates are met.
Value-based payment / VBHC (7)	VBP design, quality incentives, quality-spending linkage	Value requires joint consideration of outcomes, quality, cost, and risk adjustment.	Use value indicators as gates and modifiers, not as a single pay formula.
Organizational performance (4)	AMC sustainability, population health, governance and executive incentives	Institutional metrics shape behavior and should extend beyond revenue and volume.	Connect gainsharing to sustainability, academic mission, governance, and strategic results.

Fragmented Evidence and the Integrative Gap

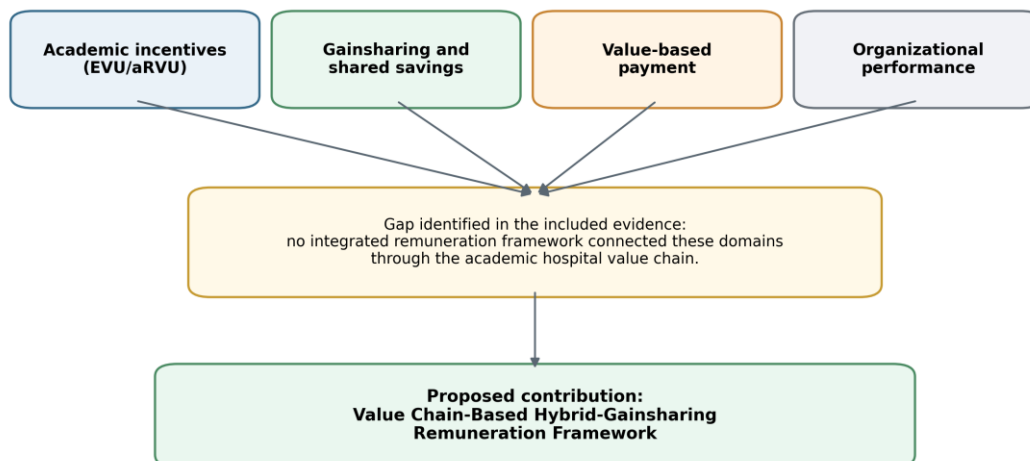
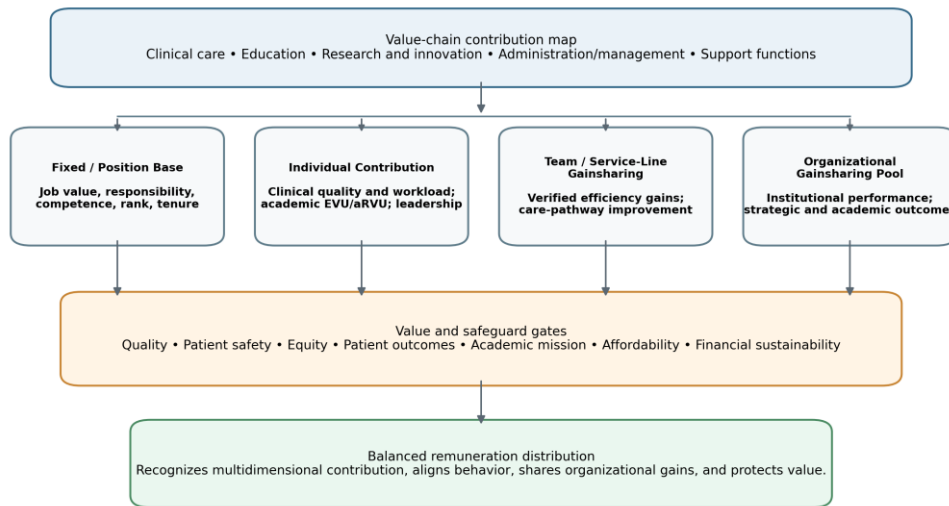


Figure 4. Research gap identified through thematic synthesis. Existing evidence streams were developed separately; the proposed contribution integrates them through the academic hospital value chain.

Why a value chain-based hybrid model is needed. The principal gap is not the absence of individual incentive instruments; it is the absence of an integrative design logic. Academic incentives, individual productivity, shared savings, value-based payment, and organizational performance address different levels of contribution. A value chain-based hybrid model connects these levels. Fixed or position-based remuneration recognizes job value and

professional responsibility. Individual variable remuneration recognizes workload, clinical quality, and academic contribution. Team or service-line gainsharing recognizes collaborative efficiency and care-pathway improvement. Organizational gainsharing links the workforce to institutional performance and sustainability. Value and safeguard gates prevent the distribution of gains when quality, safety, equity, academic mission, or financial sustainability deteriorate. This layered architecture also reduces the risk that a single metric dominates professional behavior.

Proposed Value Chain-Based Hybrid-Gainsharing Remuneration Framework



Conceptual framework requiring empirical validation, stakeholder testing, and financial simulation before implementation.

Figure 5. Proposed Value Chain-Based Hybrid-Gainsharing Remuneration Framework. The framework combines fixed or position-based remuneration, individual clinical and academic contribution, team or service-line gainsharing, and an organizational gainsharing pool, subject to value and safeguard gates. It is a conceptual synthesis and not a validated payment formula.

Policy implications for Indonesian academic hospitals. Indonesian BLU regulation already provides several building blocks for hybrid remuneration. Current provisions recognize salary, fixed allowances, incentives, achievement bonuses, and other components; require job evaluation and grading; link remuneration to performance contracts; and condition payment on organizational performance, governance, and financial capability (Ministry of Finance of the Republic of Indonesia, 2020, 2022, 2025). Academic-hospital regulation, meanwhile, defines integrated service, education, and research functions and recognizes the multidimensional work of clinical educators (Indonesia, 2018; Wicaksono & Bakri, 2024). The regulatory building blocks are therefore present, but they are not yet assembled into a specific value chain-based hybrid-gainsharing framework for academic hospitals. Adaptation should occur within—not outside—the BLU accountability framework.

Table 4. Indonesian policy baseline and the design gap addressed by the proposed framework.

Policy area	Current policy baseline	Remaining design gap	Potential framework response
BLU remuneration principles	Responsibility and professionalism; proportionality, equality, appropriateness/job value, and performance.	Principles are general and do not map academic-hospital value-chain contributions.	Translate clinical, academic, team, and institutional contributions into layered indicators.
Components and contracts	Salary, allowance, incentive, bonus, and performance-contract mechanisms.	No standard architecture specifies the relationship among fixed pay, academic incentives, and gainsharing.	Use fixed base + individual layer + team/service-line gainsharing + organizational pool.
Academic-hospital mandate	Integrated healthcare, education, research, and multiprofessional learning.	Academic work may remain invisible in remuneration if it is not quantified and funded.	Introduce EVU/aRVU or equivalent academic contribution metrics.
Quality and sustainability	BLU performance, governance, financial capability, and service continuity are considered.	Financial performance may dominate if quality, equity, and academic mission are not explicit gates.	Apply quality, safety, equity, academic mission, and sustainability gates before gains are distributed.
Clinical educators	Clinical educators undertake service, education, research, and community engagement.	The multidimensional role is recognized, but a corresponding integrated remuneration design is not specified.	Align role expectations with job value, academic credits, performance metrics, and protected resources.

Implementation and future research. The framework should be operationalized incrementally. First, an institution should map its value chain and define the contributions expected from professional groups. Second, indicators should be developed with clinicians, educators, researchers, management, finance, and employee representatives. Third, weights and distribution rules should be tested using expert prioritization and financial simulation under surplus, deficit, and growth scenarios. Fourth, pilot implementation should assess reliability, behavioral response, equity, administrative burden, and unintended consequences. The model should not distribute savings that are achieved through reduced necessary care, unmeasured workload transfer, or underinvestment in education and research.

Strengths and limitations. This review integrated evidence from academic compensation, educational metrics, gainsharing, value-based payment, and organizational performance—literatures that are rarely interpreted together—and translated the synthesis into a policy-oriented conceptual framework. Several limitations should be considered. PubMed was the only formal database; title/abstract screening and data extraction were conducted by one reviewer; and the use of publication-date and language limits may have reduced sensitivity. The evidence was dominated by the United States, which limits direct transferability to other institutional and financing contexts. Supplementary identification through reference checking strengthened conceptual coverage but was less reproducible than the database search. No formal quality

appraisal was performed. Finally, the framework has not been empirically validated and should not be interpreted as evidence of effectiveness or as a ready-to-implement payment formula.

CONCLUSION

The findings indicated that academic hospital remuneration systems have evolved through distinct approaches rather than a unified institutional framework. Educational value unit (EVU) and academic relative value unit (aRVU) models recognize educational and scholarly contributions; faculty compensation models emphasize institutional mission alignment and remuneration equity; gainsharing mechanisms distribute verified efficiency gains; value-based payment incorporates healthcare quality and patient outcome accountability; and organizational performance indicators link remuneration to institutional sustainability and governance. Within the reviewed literature, no comprehensive framework was identified that systematically integrated these dimensions across the academic hospital value chain. Accordingly, this review proposed a Value Chain-Based Hybrid Gainsharing Remuneration Framework comprising four interconnected components: fixed base remuneration, individual incentives for clinical and academic contributions, team- or service-line-based gainsharing, and an organization-wide gainsharing pool. These components were designed to operate within safeguards addressing healthcare quality, patient safety, equity, academic responsibilities, financial affordability, and institutional sustainability. For Indonesian academic hospitals, the proposed framework could complement existing Badan Layanan Umum (BLU) remuneration regulations by translating contributions across clinical services, education, research, innovation, management, and supporting activities into measurable and financially assessable remuneration components. However, empirical validation, stakeholder consultation, and scenario-based financial simulations are necessary to establish the framework's feasibility, effectiveness, and financial sustainability before practical implementation.

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