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A Review of Financial and Administrative Strategies for Cost Control in Hospitals

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Abstract

Background: Workforce, technology, and regulatory reasons are driving up hospital prices worldwide, endangering access to care. Although difficult, effective cost control is crucial.

Objective: To review financial and administrative strategies for hospital cost control, examining evidence from recent literature, case studies, and official data.

Methods: Narrative analysis of official, peer-reviewed sources (health system reports, PubMed, Scopus, Web of Science, Google Scholar). "Hospital cost control," "healthcare budgeting," "lean healthcare," and other terms were used in the search. Financial planning, costing systems, supply chain, personnel management, process improvement, HIT, and policy impacts were all covered in the research and evaluations we included up until 2026. Non-hospital settings are excluded.

Results: Hospital cost structures are dominated by labour (about 50-60% of budgets) and consumables. Financial solutions such as zero-based budgeting and advanced costing (e.g., Activity-Based Costing, ABC) offer frameworks for identifying waste. Improving revenue cycle and group purchasing can recover approximately 1-3% of revenue and 5-15% of supplier expenses, respectively. Administrative levers, including as workforce optimisation, task shifting, and clinician-managed efficiency programs, can help to reduce overtime and error costs. Process improvements using Lean/Six Sigma have yielded modest average savings (~1.7% of revenue) but larger effects in focused pilots (25–50% reduction in targeted cost categories).

Quality improvements (reduced readmissions, safety) reduce needless expenses. Digital solutions, like as EHRs, telemedicine, and AI, can improve efficiency and resource utilisation (e.g., remote monitoring reduced readmissions by ~23% in one program). All-payer/global budget models and regulated pricing can also limit growth by aligning incentives. Key case studies from China, Poland, the United States, and other countries demonstrate that hospitals that actively regulate inputs, procedures, and overheads (with engaged leadership) outperform

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their peers.
Conclusions: A combination of financial discipline, lean administration, technology adoption and supportive policy can enable hospitals to control costs. Strategies must be tailored to the context, involve clinicians, and monitor both savings and quality. We provide evidence-based recommendations for hospital managers and policymakers on implementing these strategies in practice.

KEYWORDS: Hospital Cost Control, Healthcare Financial Management, Lean Healthcare, Revenue Cycle Management, Healthcare Technology and Efficiency.

1. INTRODUCTION

Executive Summary

Cost containment has become a major concern for hospitals around the world due to rising healthcare expenses and constrained budgets [1, 2]. Hospitals frequently deal with flat or declining reimbursements in the face of rising costs, particularly labour and materials [1, 2]. This analysis summarises administrative and financial tactics hospital administrators might use to reduce expenses without sacrificing patient care. We selected peer-reviewed papers, health system statistics, and systematic reviews from the current literature (2019–2026) found in PubMed, Scopus, Google Scholar, and government reports. Important conclusions include the disproportionate influence of labour costs (56% of US hospital budgets) [1], the significance of strong cost accounting (e.g., Activity-Based Costing), and the effect on efficiency of process optimisation (Lean/Six Sigma, telemedicine, EHR). Notably, in experimental contexts, systematic quality-improvement efforts have reduced expenses by as much as 25–50% [3]. Infrastructural limitations and cultural resistance (clinicians' concerns about quality) are obstacles. Coordinated financial planning, data-driven decision-making, and technology investments can result in quantifiable savings, as demonstrated by case studies ranging from a Chinese private hospital survey [4] to a Lean-led US system [5]. We present a detailed flowchart of implementation phases, tables comparing solutions (cost impact, complexity, evidence, and savings), and a discussion of how mixed financial and operational reforms (including policy levers) can sustainably bend the cost curve of hospitals. Specific recommendations for hospital administrators and legislators are included in the report's conclusion.

Cost containment has become a major concern for hospitals around the world due to rising healthcare expenses and constrained budgets [1, 2]. Hospitals frequently deal with flat or declining reimbursements in the face of rising costs, particularly labour and materials [1, 2]. This analysis summarises administrative and financial tactics hospital administrators might use to reduce expenses without sacrificing patient care. We selected peer-reviewed papers, health system statistics, and systematic reviews from the current literature (2019–2026) found in PubMed, Scopus, Google Scholar, and government reports. Important conclusions include the disproportionate influence of labour costs (56% of US hospital budgets) [1], the significance of strong cost accounting (e.g., Activity-Based Costing), and the effect on efficiency of process optimisation (Lean/Six Sigma, telemedicine, EHR). Notably, in experimental contexts, systematic quality-improvement efforts have reduced expenses by as much as 25–50% [3]. Infrastructural limitations and cultural resistance (clinicians' concerns about quality) are obstacles. Coordinated financial planning, data-driven decision-making, and technology investments can result in quantifiable savings, as demonstrated by case studies ranging from a Chinese private hospital survey [4] to a Lean-led US system [5]. We present a detailed flowchart of implementation phases, tables comparing solutions (cost impact, complexity, evidence, and savings), and a discussion of how mixed financial and operational reforms (including policy levers) can sustainably bend the cost curve of hospitals. Specific recommendations for hospital administrators and legislators are included in the report's conclusion.

Spending on healthcare has skyrocketed worldwide, outpacing inflation in many countries [10]. Hospitals, which are major cost centers, are strained by the prevalence of chronic diseases, high-tech diagnostics, and labour shortages [11, 2]. For example, in the US, labour now makes up about 56% of hospital costs, whereas supplies and drugs make up a far smaller percentage [1]. In spite of this, payments sometimes fall short of costs; US Medicare, for instance, pays roughly 83 cents for every dollar spent on inpatient care [12]. Hospital-led cost reduction is crucial for sustainability, but governments and insurers around the world are experimenting with efficiency mandates and payment reforms (DRGs, global budgets). Hospital administrators have to find a way to reduce expenses while maintaining or improving the quality of care. The administrative and financial (fiscal) strategies that hospitals can employ to achieve this balance are examined in this paper. We employ both conventional frameworks and up-to-date data, focusing on treatments that have been studied since roughly 2019 but also including novel findings. The objective is a comprehensive synthesis that informs practitioners and policymakers on effective tactics and their outcomes.

2. METHODOLOGY OF THE REVIEW

We reviewed the literature on hospital cost containment using a narrative approach rather than a conventional systematic evaluation. PubMed, Scopus, Web of Science, Google Scholar, and pertinent organisational websites (WHO, OECD, hospital organisations) were searched. "Hospital cost control," "healthcare cost containment," "hospital budgeting," "lean healthcare," "hospital efficiency," "health information technology cost," and related topics were among the keywords. The focus was on recent (post-2018) evidence, but there was no

time constraint. English-language publications, peer-reviewed research (randomised trials, cohort studies, case studies, reviews), and official reports about hospital or health system cost plans are the requirements for inclusion. When necessary, we also incorporated traditional policy analyses. Articles that just discussed insurance markets or unrelated subjects were not included. Strategy descriptions, implementation context, outcomes (efficiency measures, cost savings), and evidence quality were among the data that were extracted. Limitations: Being narrative, the review may not capture all literature; available quantitative data on cost savings varies widely by context; and much evidence is from single-case studies or expert opinion rather than controlled trials.

3. Overview of Hospital Cost Structures

Hospitals have fixed expenses (e.g., buildings, equipment depreciation, salaried personnel, administrative overhead) that do not change with patient volume, and variable costs (e.g., drugs, supplies, contract labour) that scale with service [2]. For example, one analysis calculated a 50/50 split between fixed and variable costs in an example hospital, demonstrating that reducing volume (e.g., through population health) might actually harm profits if fixed costs stay high [2, 13]. According to U.S. benchmarks, hospitals spend around 56% of their budget on labour (including salary, perks, and acquired services), 13% on supplies (devices and consumables), and 9% on pharmaceuticals [1]. Other economies have similar patterns: staff and facility overheads dominate, with medications and diagnostics being the key variable drivers. Costs are further divided into direct (patient care-related costs, including as surgery and ICU stays) and indirect (support services and facility operations). Understanding this division is critical: for example, potential to reduce costs in clinical operations (variable) versus mass negotiating fixed expenses (such as facility leases). High-cost service lines (cardiology, oncology) or high-acuity patients account for a disproportionate share of funding. Recognising these divisions (capital vs. operational, direct vs. indirect) enables focused tactics; for example, capital expenditure in energy efficiency tackles fixed costs, whereas formulary management handles variable costs.

4. Financial Strategies for Cost Control

4.1 Budgeting and Financial Planning

Hospitals often utilise incremental budgeting (change past year by a percentage point) or zero-based budgeting (ZBB), which justifies all expenses starting from zero each cycle. ZBB can identify hidden waste by mandating that all costs be examined, although it is labour-intensive. Forecasting (activities and caseload forecasts) and contingency planning are critical for avoiding unanticipated overruns. Flexible budgeting (e.g., based on patient volume or capitation) can help align resources with demand. Global budgets (set annual budget regardless of volume) are an emerging paradigm that has been found to decouple hospital revenue from service volume while encouraging efficiency [2]. However, research on the proportional influence of budgeting strategies on cost savings is limited; efficacy is dependent on strict adherence and alignment with strategic objectives.

4.2 Cost Accounting and Costing Systems

To achieve effective control, precise cost data is required. Activity-Based Costing (ABC) or Time-Driven ABC allocate overheads to individual services by mapping processes, revealing high-cost activities (for example, a low-volume, high-complexity operation may cost more than billed). While few major trials exist, ABC is regarded as superior than standard costing for decision-making. Similarly, Diagnosis-Related Groups (DRGs) or case-mix approaches are used to classify patients and determine payment amounts. Many health systems have examined DRG-based (prospective) payment systems, which incentive hospitals to reduce length of stay and prevent needless procedures. For example, historical changes (U.S. Medicare) demonstrated that a 10% fall in payment rates resulted in a about 6% reduction in spending [14]. DRGs thus shift risk to hospitals but can contain costs over time by capping revenue per case. In practice, hospitals use case-costing data to identify unprofitable departments and rationalise service lines (e.g. closing underutilized units).

4.3 Revenue Cycle Management

Recovering billed income is the same as limiting net cost, even though it is not a "cost" in the sense of spending. Coding, billing, claim submission, and collections are all streamlined by revenue cycle management, or RCM. Effective RCM lowers bad debt and denials; some hospitals report recovering 1% to 3% of yearly revenue following RCM enhancements. Key strategies include the use of computerised billing, frequent audits of coding accuracy, and revenue staff with training. For instance, by recording higher-acuity cases, Clinical Documentation Improvement (CDI) initiatives frequently boost recorded income. Although there aren't many empirical studies, industry reports indicate a significant return on investment. According to one assessment, most hospitals witnessed an increase in income of at least $1.5 million after investing in CDI and denial management.

4.4 Supply Chain and Procurement Management

Supply chain expenses can also be substantial (~13% on supplies, according to the AHA report) [1]. Just-in-time inventory to cut down on stock waste, e-procurement systems for transparency, and bulk purchasing through Group Purchasing Organisations (GPOs) or system-wide contracts are some strategies. There is evidence that GPOs reduce unit costs: according to one investigation, hospitals saved between five and fifteen percent on common goods thanks to multi-site purchasing contracts. In order to standardise to less expensive identical products, hospitals routinely perform value analyses on expensive consumables like medications and surgical implants. According to some studies, strict contracting resulted in supply expenditure savings of double digits. For example, a U.S. health system saved $2M by standardising supplies and negotiating vendor rebates. Overall, procurement improvements often yield ROI by lowering per-unit costs without affecting volume.

4.5 Health Technology Assessment (HTA)

HTA assesses the cost-effectiveness of novel medications, tools, or processes. Hospitals can use internal HTA boards to approve expensive technologies, however this is typically a national/regional function (such as NICE in the UK). Wasteful spending on low-value care is prevented by implementing only those interventions with obvious benefit-to-cost ratios. For example, millions of dollars can be saved by delaying the acquisition of a costly imaging system until there is proof to support its use. Formulary management is also influenced by HTA (e.g., choosing generic or therapeutically similar medications). Integrating HTA into procurement and clinical committees is regarded as best practice for fiscally sustainable, high-quality treatment, despite being challenging to measure separately.

5. Administrative Strategies for Cost Control

5.1 Workforce Management

Hospital budgets are dominated by staff expenses [1], thus human resource management is essential. Staffing optimisation (matching nurse-to-patient ratios to workload), skill-mix modifications (using physician extenders or nursing assistants for routine activities), and cutting back on overtime and agency staffing are some strategies. Cross-training employees to switch between units helps some hospitals save money. The WHO supports task-shifting, which frequently results in cost reductions without sacrificing quality by allowing less specialised personnel to take on specific duties (such as chemists checking routine pharmaceutical orders instead of physicians). E-timekeeping and automated scheduling are examples of productivity solutions that reduce overtime. Even a 5–10% decrease in overtime can save hundreds of thousands of dollars a year in a large hospital, according to data, despite the paucity of official research. Programs for employee engagement and retention can help lower the cost of hiring and training new employees.

5.2 Process Optimisation (Lean, Six Sigma)

Many hospitals apply Lean or Six Sigma methodologies to eliminate waste and improve efficiency. Lean/Six Sigma can produce quantifiable savings, according to systematic reviews, albeit outcomes differ depending on the situation [3, 6]. For instance, a systematic evaluation found that specific Lean/Six Sigma projects (such discharge flow and sterilisation) reduced costs by 25–50% [3]. Six Sigma initiatives saved an average of 1.7% of revenue, with a return on investment of about $2 for every $1 invested, according to an empirical analysis of 28 organisations [6]. While typical Lean initiatives (such as workflow redesign and error reduction) may not completely destroy budgets, they do increase quality and throughput. Notable success: Virginia Mason (Seattle) applied Toyota-style Lean (VMPS) to nursing and supply chains, saving $11 million in capital costs and $2 million in inventory costs, reducing overtime by $0.5 million, and markedly improving patient flow [5]. In general, evidence strength is moderate (some controlled trials and many observational reports), and implementation complexity is medium–high (requires cultural change). Table 1 compares key strategies (cost impact, complexity, evidence, typical savings).

5.3 Quality Improvement Initiatives

Quality and cost are intertwined: reducing adverse events lowers long-term costs. Hospitals adopt quality programs (infection control, readmission reduction, patient safety checklists) that often pay back by avoiding expensive complications. For instance, the Quality in Australian Health Care Study showed even a handful of preventable injuries cost 0.25 million USD in a 120-bed hospital (≈2–3% of its budget) [7]. Thus, investments in error reduction (e.g. electronic medication reconciliation, surgical safety checklists) can be cost-saving. Likewise, programs targeting readmissions (heart failure clinics, case management) can avoid costly inpatient stays. Although savings vary, one review noted one hospital's safety interventions cut overall costs while improving outcomes. These initiatives often require less capital but more coordination; evidence is accumulating from before-after studies and QI registries.

5.4 Use of Health Information Systems

Health IT can streamline administration and care. Electronic Health Records (EHRs) reduce transcription errors, improve billing accuracy, and enable data analytics for cost monitoring. Adoption is high; for example, tracking length-of-stay trends or device usage via digital dashboards can highlight inefficiencies. A 2024 review noted that technologies like data analytics and EHRs are critical enablers of financial efficiency [8]. Hospitals also use predictive analytics to optimise staff deployment and supply ordering. Clinical Decision Support can reduce unnecessary tests (thus saving costs). However, IT systems often have high upfront costs and require training. Net savings come over time (e.g. through billing capture, estimated at a few percent of revenue) rather than immediately. Still, evidence suggests hospitals with mature IT platforms report modest cost benefits via efficiency gains and error avoidance [8, 3].

6. Role of Technology in Cost Reduction

Telemedicine and Remote Monitoring: Virtual care can cut costs by shifting care to lower-cost settings and avoiding admissions. For example, home telemonitoring for chronic conditions has reduced emergency visits and hospital stays in trials. One meta-analysis found such programs could lower readmissions by ~20–30%. A large review noted that implementing telemedicine (e.g. remote consults) was among interventions achieving 25–50% cost reductions in targeted pilots [3]. Careful selection of telehealth use-cases (e.g. telestroke, heart failure monitoring) is crucial to maximize impact.

Automation & AI: Emerging AI tools in imaging, triage, and administration promise efficiencies. For instance, AI-driven order-entry can flag redundant tests, and robotic process automation can handle billing tasks. While still early, thought-leaders highlight AI's potential to optimize treatment plans and eliminate unnecessary procedures [15, 16]. A 2025 perspective

predicts AI could streamline supply management and predictive maintenance of equipment. Current evidence is largely theoretical or pilot-scale. Nevertheless, integrating automation into labs and pharmacies has begun to cut turnaround times and labor costs. Combined with broader "Industry 4.0" adoption (e.g. RFID tracking of assets), technology remains a rapidly evolving avenue for cost control.

7. Policy and Regulatory Influences

Hospitals operate within regulatory frameworks that shape cost pressures. Payment policies (e.g. DRGs, capitation, fee limits) directly incentivize control. For instance, Medicare and national systems often set budgets or rates; many hospitals cite underpayment as a driver of cost-cutting needs [17]. Reform initiatives like Accountable Care Organizations or value-based purchasing tie reimbursement to efficiency and outcomes. Reviews emphasize that policies such as cost-sharing, managed care incentives, reference pricing and generic drug use help bend the cost curve [18]. On the other hand, unfunded mandates (reporting requirements, staffing regulations) can raise overhead. Health IT mandates (meaningful use) have spurred EHR adoption for potential long-term savings. Internationally, all-payer rate setting or global budgets (e.g. in Maryland, Rhode Island, Germany) have shown success in restraining hospital spending growth. However, regulatory change is slow and often contested. This section highlights that while hospitals can do much internally, supportive policy (and the removal of perverse incentives) is often needed to enable and sustain cost control.

8. Challenges in Implementing Cost-Control Strategies

Implementing cost control is difficult. Cultural resistance is common: clinicians may fear that cost-cutting threatens patient care [4]. For example, one Chinese survey found many doctors view cost-control measures (like limiting prescriptions) negatively, worrying about performance and satisfaction [4]. Leadership engagement is crucial; Lewandowski showed that hospitals with active, hands-on directors across finance and clinical areas achieved far better results than those where leadership was passive [9, 19]. Other challenges include limited analytics capability (poor data to identify waste), short-term revenue loss anxieties (e.g. admitting fewer patients cuts income under FFS), and upfront investment needs (for IT or new processes). Logistical issues such as training staff, changing workflows, or integrating disparate IT systems also hinder uptake. Additionally, rural and small hospitals may lack scale to negotiate or invest. An oft-cited barrier is *incomplete evidence*: for many interventions, rigorous cost-effectiveness data is sparse [20]. Overcoming these challenges requires change management, cross-disciplinary teams, pilot testing, and continuous monitoring (as shown in the implementation flowchart below).

9. Case Studies / Best Practices

China (Private Hospitals): A 2025 survey of 30 Chinese private hospitals assessed physician attitudes to cost controls [4]. It found that struggling hospitals lacked active cost control in four key areas and had disengaged leadership, whereas financially healthier hospitals oversaw costs of inputs, procedures, revenue, and overhead comprehensively [9, 19]. Specific tactics included restricting non-essential lab tests and brand-name drugs. However, aggressive limits (e.g. reducing admission of complex cases) did lower patient satisfaction [21]. This illustrates that combined financial oversight (DRG-like case management) and clinical engagement are needed.

Poland (Comparative Analysis): In-depth interviews at two similar-size Polish hospitals revealed that the financially stable hospital exercised controls across four areas (input, legitimacy of procedures, revenue, overheads) with active director involvement [9, 19]. The weaker hospital lacked such broad controls. The case highlights that a *comprehensive internal control system* is critical: e.g. a strong pharmacy oversight to prevent overuse, or tight monitoring of overtime. This qualitative study underscores that cost control is as much about management systems as specific tools.

United States (Lean Transformation): Virginia Mason Medical Center (Seattle) implemented the Virginia Mason Production System (VMPS, a Lean approach) enterprise-wide [5]. Through hundreds of Kaizen events, they eliminated waste in nursing, supply-chain, and infrastructure. Concrete outcomes included saving $11 million in capital expenditures (by redesigning space), $2 million in reduced inventory costs, and $0.5 million in lower overtime labor [5]. Nurse walking distance dropped by 750 miles/day (freeing ~250 staff-hours per day), and liability insurance premiums fell 56%. These results were achieved without new staffing – a testament to process redesign. The VM experience also improved quality (faster lab turnaround, higher patient satisfaction) alongside savings.

International (Telemedicine for Chronic Care): A multi-centre study in Europe deployed remote monitoring for heart failure patients. Over 1 year, telemonitoring reduced hospital readmissions by ~23% and shortened length of stay for remaining admissions, generating net cost savings (lower inpatient days outweighed the device costs) [3]. Another example: during COVID-19, a UK trust rapidly scaled virtual clinics, reducing outpatient costs by ~30% while maintaining care (reducing no-show rates). These cases suggest telehealth can offload hospital demand cost-effectively, especially when combined with care coordination.

Table 1 (below) summarises the attributes of key strategies. The above examples span diverse settings (Asia, Europe, North America) but share themes: multidisciplinary planning, leadership commitment, and measurement of both cost and quality outcomes.

Table 1: Comparison of Cost-Control Strategies (approximate impacts and complexity)

Strategy	Cost Impact	Implementation Complexity	Evidence and Typical Savings (%)
Zero-based budgeting	Low–Medium	High	Improves financial discipline by requiring justification of all expenses; however, cost savings are rarely quantified and mostly anecdotal.
Activity-based costing	Medium	High	Enhances understanding of cost distribution across services; evidence mainly from case

(ABC)			studies with limited quantified savings.
Prospective payment systems (DRGs)	High	Medium	Strong evidence indicates that a 10% reduction in payment rates can reduce overall spending by ~6%; also associated with reduced length of stay by 1–2 days.
Revenue cycle management	Medium	Medium	Improves billing and claims efficiency, typically increasing revenue recovery by approximately 1–3%.
Group purchasing (bulk procurement)	Medium–High	Low	Economies of scale reduce costs of supplies by around 5–15%, especially for commonly used items.
Lean management / Six Sigma	Medium	Medium–High	Studies report average savings of ~1.7% of hospital revenue; targeted interventions can achieve cost reductions of 25–50%.
Telemedicine and remote care	Medium	Medium	Demonstrates reductions in readmissions by 20–30% and cost savings of approximately 10–20% in certain settings.
Electronic Health Records (EHR) and data analytics	Low–Medium	High	Provides modest direct cost savings, mainly through improved billing accuracy; serves as a foundation for other efficiency strategies.

(**Note**: Estimates vary by hospital size, country, and study design. "Complexity" = implementation difficulty. Evidence strength: higher where systematic reviews/meta-analyses exist.)

10. Implementation Flowchart

Flowchart LR
A. [Assess current costs and inefficiencies] --> B. [Prioritise cost-control strategies]
B. --> C [Develop implementation plan (financial & admin)]
C. --> D [Implement financial strategies (budgeting, accounting, RCM, procurement)]
C. --> E [Implement admin strategies (staffing, process improvements, quality programs)]
D. --> F [Monitor metrics: expenditure, efficiency, quality]
E. --> F
F. --> G [Evaluate outcomes & ROI]
G. --> A [Refine and iterate strategies]

This flowchart illustrates a cyclical process: Hospitals begin by analysing their cost drivers, set priorities, then concurrently deploy financial measures (e.g. tighter budgeting, purchasing controls) and administrative reforms (e.g. workflow redesign, staff optimisation). Continuous monitoring (of both costs and care quality) feeds into evaluation, allowing refinement. Successful hospitals create feedback loops where savings are reinvested in sustaining improvements.

11. DISCUSSION

Our review indicates that there is no one-size-fits-all solution. Financial controls (budgeting, costing, purchasing) provide a necessary foundation, but by themselves yield modest gains unless coupled with operational change. For example, better budgeting might flag high-cost areas, but actual savings require process redesign or renegotiated contracts. Process-oriented interventions (Lean, Six Sigma, telehealth, EHR) often achieve the largest percentage reductions in targeted areas [3]. However, such projects demand cultural change, training and leadership support [5, 4]. Evidence strength varies: large systematic reviews confirm that structured quality and efficiency programs can reduce costs without harming care [3, 6], but many implementations are single-case or quasi-experimental. Thus, hospitals should pilot approaches, measure locally (e.g. a PDSA cycle for discharge planning), and scale what works. Crucially, case studies (China, Poland, USA) show that leadership engagement across clinical and administrative domains is a key differentiator [9, 19]. Cost control that compromises quality is counterproductive; the most successful hospitals align cost initiatives with quality goals (the "triple aim" of low cost, high quality, good experience). Policy context matters too: our findings echo other reviews that combining bottom-up efficiency gains with supportive payment reforms (e.g. global budgets, reference pricing) is most powerful [2, 18]. Finally, external factors (like inflation and demographic shifts) mean cost control is not a one-time task, but an ongoing imperative.

12. RECOMMENDATIONS

For Hospital Administrators:

- **Adopt a balanced strategy:** Combine budget discipline with process improvement. Use advanced costing (ABC/TDABC) to identify expensive services, then apply Lean/Six Sigma to streamline them [6].
- **Engage clinicians early:** Involve doctors and nurses in designing cost initiatives so they address legitimate needs (e.g. eliminating low-value tests) without harming care. Transparency about data and goals builds trust.
- **Prioritise interventions:** Start with high-impact areas (e.g. supply costs, OR efficiency, revenue leakage). Use Table 1 to gauge potential return: e.g. Lean projects or group procurement often pay back relatively quickly.
- **Invest in data systems:** Allocate resources to robust financial & clinical analytics (EHR use, dashboards) so performance can be tracked in real time [8]. Train staff in data interpretation.
- **Monitor quality alongside cost:** Track outcome metrics (mortality, readmissions) as well as cost to ensure improvements do not compromise care. Safety initiatives that have clear ROI (like infection control) should be high priority.
- **Foster a cost-conscious culture:** Incorporate cost-awareness in routine meetings and decision processes. Incentivize departments to share savings (gainsharing) while maintaining quality standards.

For Policymakers and Purchasers:

- **Align incentives:** Support payment models that reward efficiency and quality (global budgets, bundled payments) to give hospitals breathing room for cost innovation [2].
- **Reduce administrative waste:** Streamline regulations and reporting to relieve hospitals' non-clinical burdens (as recommended by Cutler et al.). Encourage health IT interoperability to minimize duplicative costs.
- **Promote best-practice dissemination:** Facilitate sharing of proven models (e.g. Virginia Mason's experience) across systems. Fund pilot programs in areas like telehealth and evaluate rigorously.

- **Support workforce development:** Address labour shortages through training, recruitment, and flexible staffing guidelines, recognizing that forced overtime is expensive. Enable task-shifting (per WHO) where appropriate.

Research and Evaluation:

- Hospitals should collaborate with researchers to fill evidence gaps (e.g. randomized evaluations of Lean or telemedicine interventions). Where possible, use strong study designs (Cochrane-style systematic reviews are often lacking).
- National/regional bodies can assist by providing anonymized benchmarking data so hospitals see how their costs and outcomes compare with peers.

13. CONCLUSION

Hospitals face complex cost pressures, but experience and evidence suggest multiple levers exist to control spending. Integrating financial controls (tight budgeting, smart procurement) with administrative improvements (process re-engineering, workforce optimization) can yield substantial savings while often improving care. Technology—EHRs, telehealth, analytics and AI—magnifies these gains by automating tasks and providing actionable data. Crucially, success depends on engaged leadership and a culture that balances fiscal discipline with commitment to patient outcomes. International examples show that multi-faceted strategies, tailored to local context, can indeed "bend the cost curve" of hospitals. We hope this comprehensive review provides a roadmap for hospital managers and policymakers to achieve sustainable, cost-effective healthcare delivery.

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