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The Influence of Public Financial Management (PFM) on Public Health System Efficiency in Uganda: A Scoping Review

Henry Omara
Department of Environmental Management, Selinus University of Sciences and Literature Rome-Italy
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Abstract*—Uganda's public health system operates under a persistent and consequential paradox. Over the past two decades, the country has made notable gains across several key health indicators, yet the efficiency with which public health resources are converted into outcomes remains systematically constrained by weaknesses in public financial management (PFM). Health sector budget absorption rates hover between 72 and 88 percent, with significant fourth-quarter expenditure concentration that distorts planning and service delivery. Drug and medical supply stockouts affect an estimated 28 to 44% of public health facilities. National Medical Stores procurement cost premia of 15 to 30% above commercial market prices represent a chronic, unaddressed allocative inefficiency. Office of the Auditor General reports consistently identify irregularities in health sector financial management, yet resulting policy recommendations achieve implementation rates of only 40 to 60%. Despite the scale of these inefficiencies, the mechanisms linking PFM quality to health system efficiency in Uganda remain insufficiently synthesised relative to the challenge they present. This scoping review maps and synthesises available evidence on PFM and health system efficiency linkages in Uganda. A systematic search across five databases and grey literature identified 26 eligible sources from 198 records. Findings reveal that PFM influences health system efficiency through five interrelated mechanisms: budget formulation quality and alignment with actual needs; budget execution consistency, timeliness and predictability; procurement and supply chain management, with implications for input cost and availability; accountability, audit and oversight, with deterrence effects on waste and fraud; and intergovernmental fiscal transfer design, with incentive effects on district health performance. Cross-cutting themes, decentralisation fragmentation, donor alignment challenges, and human resource financial management, run through all five mechanisms. The review proposes the PFM-Health Efficiency Integration Agenda for Uganda and concludes with evidence-based recommendations for the Ministry of Finance, Planning and Economic Development, the Ministry of Health, and development partners.

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***Index Terms*—public financial management; health system efficiency; Uganda; budget execution; health financing; procurement and supply chain; universal health coverage**

I. INTRODUCTION

In the language of health financing, efficiency is not a technocratic abstraction. It is the difference between a health centre that receives its drug allocation on time and can treat the child who arrives with malaria, and one that has run out of artemether-lumefantrine because its third-quarter supply request was approved in December. It is the difference between a district health officer whose budget release arrived in March and can implement the outreach programme that was planned in October, and one who is still waiting in June. It is the difference between a procurement system that pays market prices for essential medicines and one that pays a 20% premium because the procurement planning cycle is misaligned with the market. Uganda's public health system is home to all three of these inefficiencies, and many more, and their roots are traceable, in significant measure, to the structures and quality of public financial management (PFM) that govern the allocation, execution, and oversight of health sector resources (Musiega et al., 2024; Tapsoba et al., 2024).

Uganda's health financing context provides the structural backdrop for this review. The national health budget has averaged between 6.2% and 8.9% of the national budget over the past decade, consistently below the Abuja Declaration target of 15% that the Government of Uganda endorsed in 2001, and substantially below the level required to achieve universal health coverage (UHC) targets by 2030 (Uganda Ministry of Finance, Planning and Economic Development [MFPED], 2025; Ministry of Health [MoH], 2023). Out-of-pocket expenditure remains high, estimated at approximately 41% of total health expenditure in 2023, reflecting both the under-resourcing of the public health system and the quality failures that drive patients to seek care from private providers whose cost is not covered by the public budget (WHO, 2023; World Bank, 2024). Per capita government health expenditure has stagnated in real terms, while the population continues to grow at approximately 3% per year, meaning that the per capita health resource envelope is effectively contracting. Against this constrained resource backdrop, efficiency, extracting maximum health output from available inputs, is not merely a governance aspiration. It is a survival strategy for a health system trying to serve 47 million people on a budget that is structurally inadequate for the task (UBOS, 2024; Barasa et al., 2022).

The global evidence on PFM-health efficiency linkages has developed substantially in recent years. Musiega et al. (2024), in the most directly relevant recent scoping review, published in Wellcome Open Research, synthesised evidence on the mechanisms through which PFM influences health system efficiency, finding that the entire budget process from formulation through execution shapes efficiency outcomes, with budget execution processes emerging as the most consistently identified bottleneck. Tapsoba et al. (2024), using Public Expenditure and Financial Accountability (PEFA) scores as proxies for PFM quality across sub-Saharan African countries from 2005 to 2018, found statistically significant correlations between PFM quality and

under-five mortality and maternal mortality rates, suggesting that improvements in PFM systems have direct, measurable life-saving effects. Musiega et al. (2023), examining county health systems in Kenya, documented how budget execution processes specifically, the timing of fund releases, the predictability of transfers, and the flexibility of budget lines, directly shape health system efficiency by determining whether health facilities have the resources to deliver services when services are needed.

Uganda offers a particularly instructive case for studying these relationships because it has undergone successive PFM reform efforts since the introduction of the Integrated Financial Management System (IFMIS) in the late 1990s, yet health sector financial management challenges persist at scale. The Public Finance Management Act (2015) established the legal framework for fiscal discipline, budget transparency, and accountability. The National Health Accounts exercise provides periodic evidence on financial flow patterns. The annual PEFA assessments track PFM system quality across standardised dimensions. And the Office of the Auditor General (OAG) produces detailed annual audit reports that document, with specificity, the financial management failures occurring across Uganda's health sector, from unaccounted-for funds at district level to procurement irregularities in the National Medical Stores to payroll ghost workers in health facility staff lists. What the audit evidence documents in detail, the PFM reform agenda has been unable to systematically address, and the gap between financial management aspiration and practice in Uganda's health system generates the inefficiency that ultimately costs lives (MoH, 2023; Barasa et al., 2022; Mbau et al., 2022).

Decentralisation is a cross-cutting structural factor that shapes PFM-health efficiency relationships throughout the Ugandan system. Following the 1997 Local Government Act, Uganda decentralised significant health service delivery responsibilities to district and sub-district levels, including health facility management, district health team oversight, and health worker supervision. This decentralisation created a complex multi-level fiscal architecture in which health resources flow from the national level through the Ministry of Finance to districts through the Integrated Support Programme grants, and from districts to health facilities through the facility-level conditional grants, with each transfer point representing both a potential efficiency gain (through localised decision-making) and a potential efficiency loss (through leakage, delay, and misallocation). The evidence on whether Uganda's decentralisation has improved health system efficiency is mixed: districts with stronger local governance institutions show better health resource absorption and service delivery performance, while districts with weaker local government capacity show persistent budget execution problems and facility-level stockouts that reflect both financial management and governance deficits (Namakula et al., 2025; Barasa et al., 2022).

The international donor dimension of Uganda's health financing is equally significant for PFM-efficiency analysis. Donors contribute approximately 40-50% of Uganda's total health expenditure through a mix of on-budget and off-budget channels, with a substantial proportion flowing through disease-specific vertical programmes (Global Fund for HIV/AIDS, tuberculosis, and malaria; GAVI; PEPFAR) that create parallel PFM systems, procurement modalities, and accountability structures that are not fully aligned with Uganda's national PFM architecture (WHO, 2023;

UNICEF, 2023). The fragmentation between on-budget donor support and off-budget vertical programme funding creates allocative efficiency challenges, resources flow to donor-prioritised disease areas in proportions that may not reflect Uganda's actual disease burden, and technical efficiency challenges, parallel administrative systems create duplicative overhead costs and divert health system management attention away from comprehensive service delivery (Musiega et al., 2024; Tapsoba et al., 2024).

Health system efficiency is conventionally defined along two dimensions: technical efficiency, producing the maximum possible health outputs (services, health outcomes) from a given set of inputs (budget, staff, medicines, infrastructure); and allocative efficiency, combining inputs in the proportions that minimise cost for a given output level, or, at a higher level of analysis, allocating resources across health services and programmes in the proportions that maximise population health given budget constraints (Musiega et al., 2024; Barasa et al., 2022). Both dimensions are directly influenced by PFM quality: technical efficiency is shaped by PFM's influence on how reliably inputs (drugs, supplies, health worker salaries) are available when and where they are needed; allocative efficiency is shaped by PFM's influence on how the health budget is distributed across programmes, facilities, and geographic areas relative to need.

PFM theory identifies the budget cycle as the primary institutional mechanism through which public resources are allocated, spent, and accounted for. The cycle encompasses four phases: budget formulation (policy objectives translated into resource allocation proposals); budget enactment (legislative approval); budget execution (authorised spending translated into actual expenditure); and budget accountability (audit, evaluation, and reporting on whether resources were spent as intended and to what effect). Tapsoba et al. (2024) and Musiega et al. (2024) both demonstrate that the quality of each phase, and the coherence of the phases as an integrated system, shapes health sector efficiency outcomes, with budget execution processes generating the most consistent and direct efficiency effects in low-income country health systems. Uganda's PEFA assessments provide the most comprehensive available evidence on Uganda's PFM system quality across these phases, revealing moderate performance in budget formulation and accountability but persistent weaknesses in budget execution predictability and fiscal transfer timeliness.

Principal-agent theory provides the framework for understanding why PFM quality failures occur in Uganda's health system, why budget funds arrive late at facilities, why procurement costs exceed market prices, why audit recommendations go unimplemented. The theory identifies the information asymmetries, incentive misalignments, and accountability gaps between principals (the Ministry of Finance, the Ministry of Health, district health management teams) and agents (district accounting officers, facility managers, procurement officers, health workers) that enable and perpetuate inefficiency. Namakula et al.'s (2025) political economy analysis of health systems strengthening in Uganda documents how these principal-agent dynamics operate in practice: district health managers face competing pressures from elected politicians, central government mandates, and facility-level staff that create systematic accountability gaps, while the information asymmetries between national-level policymakers and facility-level realities enable persistent misreporting of expenditure and service delivery data.

This scoping review addresses the specific gap of a Uganda-focused synthesis of PFM-health efficiency evidence. While Musiega et al.'s (2024) scoping review provides the most comprehensive global synthesis to date, its geographic scope is not Uganda-specific, and many of the mechanisms it identifies require Uganda-specific instantiation and contextualisation to be actionable for Uganda's Ministry of Finance, Ministry of Health, and development partners. Mbau et al.'s (2022) health financing evidence synthesis for Kenya, Barasa et al.'s (2022) work on health systems financing in East Africa, and Musiega et al.'s (2023) Kenya county budget execution study provide the closest East African comparators, but Uganda's specific institutional architecture, decentralisation model, donor relationship, and PFM reform trajectory require a dedicated synthesis. This review provides that synthesis, contributing both to the PFM-health literature and to Uganda's policy discourse on health system efficiency improvement.

II. METHODOLOGY

Scoping Review Design

This study employs the scoping review methodology following the framework of Arksey and O'Malley (2005) as updated by Levac et al. (2010) and reported in accordance with the PRISMA Extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018). Scoping reviews are appropriate for this inquiry because the PFM-health efficiency evidence base in Uganda, while substantive in its components, has not been previously synthesised specifically for Uganda and encompasses heterogeneous source types, government budget analyses, PEFA assessments, academic journal articles, audit reports, and development partner evaluations, that cannot be formally meta-analysed but benefit from systematic charting and narrative synthesis (Peters et al., 2020).

Eligibility Criteria

Inclusion criteria specified:

1. Primary focus on PFM systems, processes, or reforms in Uganda's health sector, or, for studies providing directly applicable evidence on PFM mechanisms, other East African settings with documented Uganda relevance;
2. Explicit engagement with health system efficiency as an outcome, whether as technical efficiency, allocative efficiency, or efficiency-related outcomes including budget absorption, service delivery quality, drug availability, or health worker performance;
3. Publication between January 2020 and June 2025 in English;
4. Peer-reviewed journals, government budget reports, PEFA assessments, OAG annual reports, or development partner evaluations with adequate methodological transparency.

Excluded sources included purely theoretical PFM papers without health sector application, supply chain studies without PFM governance dimension, and cost-effectiveness analyses without PFM linkage.

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Data Collection Methods

A structured systematic search was conducted between January and June 2025 across five databases: PubMed/MEDLINE, Web of Science, Scopus, African Journals Online (AJOL), and Google Scholar. Grey literature was retrieved from: Uganda Ministry of Finance, Planning and Economic Development; Uganda Ministry of Health; Office of the Auditor General of Uganda; Uganda Bureau of Statistics; World Health Organization Uganda Country Office; World Bank Uganda; UNICEF Uganda; International Monetary Fund Article IV consultations; PEFA Secretariat; P4H Network; and the Overseas Development Institute. Search strings combined three term clusters:

1. PFM terms: public financial management, budget execution, budget formulation, fiscal transfer, procurement, PEFA, public expenditure, health financing, budget absorption.
2. Health system terms: health system efficiency, health service delivery, universal health coverage, health financing, drug supply, health workforce, health facility management.
3. Geographic terms: Uganda, East Africa, sub-Saharan Africa. Boolean And operators combined clusters; OR operators linked synonyms within clusters.

From 198 initially identified records, 62 were excluded at title and abstract screening. A further 110 were assessed at full-text stage: 84 were excluded for failing eligibility criteria, most commonly either the PFM-health linkage was insufficiently specified, the Uganda focus was absent, or the publication was outside the 2020-2025 window. Twenty-six sources met all eligibility criteria and were retained for data extraction. Inter-rater reliability was assessed between two reviewers at the full-text screening stage ($\kappa = 0.82$). Data extraction captured: source type, publication year, PFM dimension addressed, health efficiency dimension, key findings, Uganda-specific evidence, and knowledge gaps identified.

Data Analysis

Descriptive quantitative analysis summarised the distribution of retained sources across source type, publication year, PFM dimension, and health system efficiency dimension. Qualitative thematic synthesis following Thomas and Harden (2008) was applied to extracted evidence on PFM mechanisms, contextual factors, and policy recommendations, generating five primary thematic categories corresponding to the PFM-health efficiency mechanisms identified across the evidence base. A narrative convergence approach integrated quantitative distributions and qualitative themes into the PFM-Health Efficiency Integration Framework presented in Section 9.

Ethical Considerations

As a scoping review of publicly available published, government, and institutional literature, this study does not require formal ethical review board approval. Three ethical considerations are nonetheless acknowledged. First, the review synthesises evidence that includes government audit reports documenting financial misconduct and mismanagement in Uganda's health sector. The review's treatment of this evidence is factual, analytical, and directed at systemic rather than individual accountability, consistent with the public interest purpose of audit literature and with

the principle that publicly mandated accountability documents are legitimately available for scholarly synthesis. Second, the review's authors acknowledge potential positionality: the PFM-health efficiency relationship is a contested terrain where political economy interests, of government agencies, development partners, and civil society actors, shape the framing of problems and solutions. The review attempts to present evidence as synthesised rather than as advocacy, while acknowledging that the selection of a Uganda-specific synthesis serves the policy audience that needs it most. Third, all source attributions are accurate and complete, with no selective quotation or misrepresentation of findings.

Limitations of the Study

Five limitations constrain this review's scope and confidence. First, the 2020-2025 publication window excludes potentially foundational pre-2020 evidence on Uganda's PFM-health system, including the extensive literature on Uganda's decentralisation experience in the 1990s and 2000s. This temporal restriction means the review captures the current reform context more fully than the historical trajectory that shaped it. Second, the restriction to English-language sources may exclude relevant evidence published in internal government documents or local academic outlets that do not appear in international databases. Third, the heterogeneity of retained sources, peer-reviewed articles, government budget reports, PEFA assessments, and audit reports, makes systematic comparison difficult; each source type has different methods, audiences, and epistemological assumptions that complicate synthesis. Fourth, much of the Uganda-specific PFM-health evidence is cross-sectional or descriptive rather than causal, meaning the review can document associations and mechanisms but cannot establish causal effect sizes for specific PFM interventions on health efficiency outcomes. Fifth, the review's five-mechanism framework represents a synthesis interpretation of the evidence rather than a pre-existing theoretical structure, the framework was derived inductively and reflects the pattern of the retained evidence rather than a comprehensive theory of all PFM-health efficiency pathways.

III. RESULTS AND FINDINGS

Characteristics of Retained Sources

Table 1 presents the distribution of the 26 retained sources across source type, publication year, and PFM dimension. The dominance of grey literature and government reports reflects the policy-operational character of PFM-health efficiency evidence, where much of the most specific and actionable data is held in budget execution reports, PEFA assessments, and audit findings rather than in peer-reviewed journals.

Table 1: Characteristics of Retained Sources (N = 26).

Source Characteristic	Category	n (26)	% of 26
Source type	Peer-reviewed journal article	9	34.6%
	Government budget / health sector report	6	23.1%

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Source Characteristic	Category	n (26)	% of 26
	PEFA assessment or technical report	3	11.5%
	Office of Auditor General (OAG) annual report	3	11.5%
	Development partner evaluation / working paper	4	15.4%
	Civil society / NGO analysis	1	3.8%
Publication year	2020-2021	5	19.2%
	2022-2023	11	42.3%
	2024-2025	10	38.5%
Primary PFM dimension	Budget formulation and planning	6	23.1%
	Budget execution and absorption	9	34.6%
	Procurement and supply chain management	5	19.2%
	Accountability, audit, and financial oversight	5	19.2%
	Intergovernmental fiscal transfers	4	15.4%
	Cross-cutting / multiple PFM dimensions	8	30.8%
Geographic scope	Uganda-specific	14	53.8%
	East Africa comparative (Uganda included)	8	30.8%
	Sub-Saharan Africa comparative	4	15.4%

Source: Author's Scoping Review (2026).

The 53.8% Uganda-specific sources and 30.8% East Africa comparative studies together constitute 84.6% of the evidence base with direct Uganda relevance, confirming that the review has captured a genuinely Uganda-contextualised evidence base rather than relying predominantly on generic global PFM literature. The concentration in budget execution (34.6% primary dimension) reflects the global pattern identified by Musiega et al. (2024) and Tapsoba et al. (2024): budget execution is the PFM dimension with the most direct and documented effects on health service delivery in low-income country settings, and Uganda's budget execution challenges are well-documented in both peer-reviewed and grey literature.

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Budget Formulation Quality and Health Needs Alignment

Table 2 summarises the evidence on budget formulation quality in Uganda's health sector, capturing the extent to which annual health budgets align with actual health system needs and disease burden priorities.

Table 2: Budget Formulation Quality Indicators, Uganda Health Sector (2020-2025).

Budget Formulation Indicator	Uganda Evidence	Source	Assessment
Health budget as % of national budget (recent trend)	6.2%-8.9% range (2019-2024)	MFPED (2025); MoH (2023)	Persistently below 15% Abuja target
Per capita government health expenditure (USD)	USD 11-17 range (2020-2024)	WHO (2023); World Bank (2024)	Far below USD 86 WHO minimum target
Budget allocation to primary health care vs. referral	~55% PHC; ~45% referral	MoH (2023)	Better than many SSA peers but contested
Budget formulation participation (district level)	Low, district inputs minimally incorporated	Namakula et al. (2025)	MTEF planning largely top-down
Programme budgeting implementation	Partial, programme structure adopted but costing weak	Musiega et al. (2024)	Budget-policy alignment gap persists
Donor coordination in budget formulation	40-50% of health expenditure off-MTEF	WHO (2023); UNICEF (2023)	Significant parallel planning systems
Health workforce cost as % of health budget	~65-70% (wages)	MoH (2023)	Limited fiscal space for non-wage inputs

Source: Author's Synthesis (2026).

The most analytically consequential finding in Table 2 is the approximately 65-70% of the health budget consumed by wages, leaving only 30-35% for medicines, equipment, operating costs, and capital development. This structural constraint means that even a 15% increase in the total health budget, if distributed in current proportions, would add only approximately 4.5-5% additional resources for non-wage inputs. Effective health system efficiency improvement requires not merely more resources but a rebalancing of the formulation to ensure that the non-wage components of the health budget grow faster than the wage component, a rebalancing that

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programme budgeting reforms are attempting to support but that civil service pay policy constrains.

Budget Execution and Absorption

Budget execution, the conversion of approved budget into actual health service delivery, is the PFM dimension with the most directly documented efficiency effects in Uganda's health system. Table 3 presents the key budget execution indicators from the retained evidence.

Table 3: Budget Execution Indicators, Uganda Health Sector (2020-2025).

Budget Execution Indicator	Uganda Evidence	Source	Efficiency Implication
Health sector budget absorption rate (overall)	72%-88% (variation by year and level)	MFPED (2025); MoH (2023)	12%-28% of approved budget unspent annually
Fourth-quarter expenditure concentration	35%-45% of annual spending in Q4	MFPED (2025); OAG (2023)	Rushed, irregular Q4 spending reduces value-for-money
Fund release timing predictability (district level)	Significantly delayed; average 6-8 weeks	Namakula et al. (2025); Barasa et al. (2022)	Service delivery disruption from cash flow gaps
Primary health care conditional grant utilisation	68%-82% absorption (district variation wide)	MoH (2023); UBOS (2024)	Better-governed districts absorb significantly more
Facility-level direct financing absorption	Varies 60%-95% by facility capacity	Mbau et al. (2022)	Capacity constraints limit DHF effectiveness
Payroll management accuracy (health sector)	Ghost workers estimated 5%-12% of payroll	OAG (2023); OAG (2024)	Significant wage budget leakage
Budget reallocations / supplementary estimates	Frequent, undermines planning	MFPED (2025)	Reduces predictability for facility planning

Source: Author's Synthesis (2026).

The 35-45% fourth-quarter expenditure concentration documented in Table 3 is the single most consequential budget execution inefficiency in Uganda's health system. This concentration is not merely a statistical artefact; it represents real disruptions to health service delivery. When fund releases are delayed through the first three quarters, health facilities run out of operating supplies,

community health teams cannot conduct outreach, and district health management teams cannot maintain vehicles. When the accumulated releases arrive in Q4, they must be spent before the fiscal year ends, generating procurement shortcuts, insufficient competition, and purchases of supplies that cannot be effectively deployed in the remaining weeks. The quarterly release calendar is a PFM design choice, not a natural phenomenon, and its modification, to front-load releases in Q1 and Q2, is the single highest-leverage budget execution reform for health system efficiency (Musiega et al., 2024; Musiega et al., 2023).

"[…] Even before we have our budget approval for the next year […] often, the district is already finalizing their budget and since we have not yet finalized our budget, we cannot commit funds to the district before the donor approves. The district cycle starts in October […] our cycle starts in July. Sometimes you find that there is a certain lag in between" (IP respondent_19)" (quoted in Namakula et al., 2025, p. 12).

Procurement, Supply Chain, and Input Cost Efficiency

Table 4 presents the procurement and supply chain evidence, documenting the extent to which Uganda's health procurement systems achieve technical efficiency in input acquisition and supply chain management.

Table 4: Procurement and Supply Chain Efficiency Indicators, Uganda Health Sector (2020-2025).

Procurement / Supply Chain Indicator	Uganda Evidence	Source	Efficiency Implication
NMS essential medicine procurement cost premium	15%-30% above international reference prices	OAG (2023); World Bank (2024)	Allocative inefficiency in drug budget use
Facility drug stockout rates (public facilities)	28%-44% of facilities at any given time	MoH (2023); UNICEF (2023)	Direct service delivery failure
Emergency procurement as % of total NMS procurement	18%-25%	OAG (2023)	Higher-cost emergency procurement from planning failure
Lead time from district order to facility receipt	Average 8-14 weeks (standard procurement)	MoH (2023)	Misaligned with seasonal disease burden patterns
Procurement complaints and audit findings	Significant, 15-30% of audited procurements cited	OAG (2023); OAG (2024)	Fiduciary risk and anti-competitive practices
Community health worker supply access	55%-70% of CHW kits complete	UNICEF (2023)	Last-mile delivery breakdown

Procurement / Supply Chain Indicator	Uganda Evidence	Source	Efficiency Implication
Cold chain functionality rate	67%-78% (national average)	MoH (2023)	Vaccine efficiency losses from equipment failures

Source: Author's Synthesis (2026).

The 28-44% drug stockout rate across Uganda's public health facilities represents the most immediately visible and humanly consequential PFM-driven health system inefficiency documented in this review. A stockout is not merely a supply chain failure; it is a point at which the entire upstream investment in budget formulation, fund release, procurement, and logistics produces zero health output, because the medicine that should treat the patient is not there. The stockout rate's persistence despite multiple National Drug Policy reforms and NMS restructuring exercises suggests that its root causes lie not primarily in NMS operational management but in upstream PFM failures: the unpredictability of fund releases that prevents systematic procurement planning, the procurement cycle misalignment with disease burden seasonality, and the emergency procurement premium that accumulates when planning breakdowns force last-minute purchases.

Accountability, Audit, and Financial Oversight

Table 5 presents accountability and audit evidence, documenting the quality of Uganda's health sector financial oversight systems and their effectiveness in deterring waste and promoting efficiency.

Table 5: Accountability and Audit Indicators, Uganda Health Sector (2020-2025).

Accountability / Audit Indicator	Uganda Evidence	Source	Efficiency Implication
OAG audit recommendation implementation rate (health)	40%-60% full or partial implementation	OAG (2023); OAG (2024)	Persistent non-compliance culture
Unaccounted-for funds (district health, annual OAG)	UGX 40-85 billion cited (varies by year)	OAG (2023); OAG (2024)	Direct leakage from health budget
Internal audit coverage of health facilities	<30% of district facilities audited annually	MFPED (2025)	Inadequate deterrence through oversight
Public Accounts Committee follow-up effectiveness	Moderate, institutional but limited sanction power	OAG (2024)	Accountability loop incomplete
PEFA PI-27 (Legislative scrutiny of annual budget law)	C+ (2021 PEFA assessment)	PEFA Secretariat (2022)	Weak legislative scrutiny of health allocation

Accountability / Audit Indicator	Uganda Evidence	Source	Efficiency Implication
IFMIS coverage at district health level	~60%-70% of districts connected	MFPED (2025)	Real-time monitoring incomplete
Social accountability mechanisms (community)	Variable, active in some districts, absent in others	Namakula et al. (2025)	Underutilised efficiency mechanism

Source: Author's Synthesis (2026).

The 40-60% OAG audit recommendation implementation rate is the accountability finding with the most direct implications for health system efficiency. When audit findings are not acted upon, they function as a signal to the audited actors that non-compliance has manageable consequences, effectively lowering the deterrence effect that audit is designed to achieve. The persistent nature of this pattern in Uganda's health sector, where the same types of audit findings recur across years in the same districts and facilities, suggests a structural accountability gap that technical audit quality alone cannot close. The gap between audit finding and consequence requires both strengthened OAG sanction powers and improved audit evidence utilisation in the Public Accounts Committee and Ministerial oversight processes (OAG, 2023; OAG, 2024; MFPED, 2025).

Intergovernmental Fiscal Transfers

Table 6 presents evidence on Uganda's intergovernmental fiscal transfer system and its effects on district and facility-level health system efficiency.

Table 6: Intergovernmental Fiscal Transfer Indicators, Uganda Health Sector (2020-2025).

Fiscal Transfer Indicator	Uganda Evidence	Source	Efficiency Implication
Health conditional grant release timeliness	6–8-week average delay from central to district	Namakula et al. (2025); MFPED (2025)	Service delivery planning disruption
Equity of per capita health grant distribution	Significant variation; historical allocation drives current	MoH (2023); UBOS (2024)	Allocation not aligned with population or burden
District retention of health grant vs. central reversion	10%-15% returned to centre unspent annually	MFPED (2025)	Absorption capacity constraint at district level
Facility-level direct health financing (DHF) coverage	~60% of facilities receive DHF	MoH (2023)	40% without direct facility resource access

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Fiscal Transfer Indicator	Uganda Evidence	Source	Efficiency Implication
Matching grant mechanisms for district co-funding	Limited, most districts cannot co-fund	Barasa et al. (2022)	Co-financing incentives poorly designed for Uganda
Performance-based financing (PBF) scale	Pilot stage only, not national scale	MoH (2023)	Incentive alignment mechanisms underutilised
Gender-responsive budgeting integration in health grants	Minimal, not systematic in grant conditions	MoH (2023); MFPED (2025)	Gender equity not enforced through fiscal design

Source: Author's Synthesis (2026).

The PFM-Health Efficiency Integration Agenda (PHEA)

The PFM-Health Efficiency Integration Agenda (PHEA) proposed in Table 7 organises the five PFM mechanisms identified in this review into an integrated reform architecture, mapping each mechanism to specific reform priorities, institutional leads, and efficiency outcome indicators. The PHEA is designed as a practical policy tool for Uganda's Ministry of Finance, Ministry of Health, and development partners.

Table 7: The PFM-Health Efficiency Integration Agenda (PHEA) for Uganda.

PHEF Domain	PFM Mechanism	Core Reform Priority	Lead Institution	Efficiency Indicator
1. Budget Formulation	Health needs-budget alignment	Strengthen programme budgeting; increase PHC budget share to ≥60%; integrate district inputs into MTEF	MFPED + MoH	Health budget as % national budget approaching 12% by 2027
2. Budget Execution	Quarterly release predictability	Front-load Q1 and Q2 releases to 60%+ of annual budget; reduce Q4 concentration to <20%	MFPED + OAG	Q4 expenditure concentration ≤25% by 2027
3. Procurement	Input cost and supply efficiency	NMS framework contract reform; reduce essential medicine price premium to <10%; eliminate emergency procurement to <5%	MoH + PPDA	Essential medicine stockout rate ≤15% by 2028

PHEF Domain	PFM Mechanism	Core Reform Priority	Lead Institution	Efficiency Indicator
4. Accountability	Audit compliance and deterrence	Mandate OAG recommendation implementation plans with 90-day timelines; increase IFMIS coverage to 90% of districts	OAG + PAC + MFPED	OAG recommendation implementation rate ≥75% by 2027
5. Fiscal Transfers	Equitable and timely resource flows	Eliminate conditional grant delays to <2 weeks; equity formula revision based on disease burden + poverty	MFPED + Ministry of Local Government	DHF coverage ≥85% of public facilities by 2028

Source: Author's Synthesis (2026).

IV. DISCUSSION

The five-mechanism PHEA synthesised from this review's 26 retained sources presents Uganda's PFM-health efficiency challenge as a system problem, not a collection of individual failures that can be addressed sequentially, but an integrated set of mutually reinforcing constraints where budget formulation misalignment undermines procurement planning, fund release delays generate emergency procurement premiums, accountability gaps allow inefficiencies to persist unchallenged, and fiscal transfer design fails to match resources to need or incentivise performance.

Why Budget Execution Is the Priority Bottleneck

The convergence of evidence across multiple retained sources on budget execution as the primary PFM-health efficiency mechanism is the review's most analytically robust finding. Musiega et al. (2024) identified budget execution processes as the most consistent PFM pathway to efficiency across their global scoping review; Musiega et al. (2023) documented the specific mechanisms in Kenya's county health systems; and Uganda's own MFPED budget performance reports, OAG findings, and health sector annual reports all point consistently to Q4 expenditure concentration, fund release timing, and absorption capacity as the proximate determinants of health service delivery quality. The implication, that front-loading budget releases to Q1 and Q2 would be the highest-leverage single PFM reform for health efficiency, is technically straightforward and institutionally contested. It requires Treasury to cede quarterly discretion over fund releases, which represents a genuine political economy challenge that technical PFM reform documents systematically underestimate.

Decentralisation as Efficiency Multiplier and Efficiency Constraint

Uganda's decentralisation experience exemplifies the dual character of fiscal decentralisation for health system efficiency. In districts with strong local governance institutions, well-trained DHTs, and active community health committees, decentralisation has demonstrably improved health resource allocation to local needs and improved accountability for service delivery outcomes. In districts with weak governance, high staff turnover, and limited financial management capacity, decentralisation has created a fragmented accountability environment where the same resources produce substantially worse efficiency outcomes. Namakula et al.'s (2025) political economy analysis captures this variation with particular clarity, demonstrating that what look like PFM design problems at national level are often governance quality problems at district level, requiring differentiated rather than uniform reform responses.

Donor Fragmentation as Persistent Efficiency Threat

The 40-50% donor share of Uganda's health expenditure and the off-budget proportion of this that creates parallel PFM systems represent an ongoing efficiency drag that domestic PFM reform cannot address without donor harmonisation. Tapsoba et al. (2024) demonstrate across their SSA sample that donor fragmentation is negatively associated with health outcomes, controlling for total health expenditure, confirming that the mode of donor engagement matters, not just its volume. UNICEF's (2023) Uganda Country Programme evaluation documents the specific mechanisms: parallel reporting systems, different procurement rules, disease-specific programming that creates supply chain fragmentation, and NGO implementation partners that operate outside the government accountability architecture. The IHP+ compact and the 2023 CHPC coordination framework represent genuine progress, but the gap between coordination aspiration and parallel system reality in Uganda's health sector remains large.

V. CONCLUSION

Public financial management does not make the antiretroviral drug work more effectively, does not train the nurse to deliver the baby more safely, and does not build the health centre that communities need. What it does, when it works well, is ensure that the antiretroviral arrives at the facility before the patient runs out, that the nurse's salary is paid on the date it is due, and that the health centre construction funds reach the site before the rainy season makes access impossible. This review has documented, across 26 sources spanning Uganda's health budget, audit, procurement, and fiscal transfer systems, the systematic gaps between what PFM should deliver and what it currently delivers, and the mechanisms through which those gaps translate into health system inefficiency that costs lives.

The five mechanisms synthesised in this review, budget formulation misalignment, budget execution unpredictability, procurement cost inflation, accountability compliance gaps, and fiscal transfer inequity, are not independent problems. They are a system whose components reinforce each other: late fund releases generate emergency procurement premiums that could have been avoided with timely planning; audit findings that go unimplemented signal to the health system

that efficiency standards are aspirational rather than binding; fiscal transfer delays generate exactly the absorption capacity problems that justify the Q4 expenditure concentration that the system should be designed to prevent. Addressing any one mechanism in isolation will generate partial improvements; addressing the system requires the integrated reform architecture that the PHEA proposes and that Uganda's current health sector development planning has not yet fully operationalised.

The timing of this review is significant. Uganda's Health Sector Development Plan III (2021-2025) is in its final implementation year; its successor is being designed. The Fourth National Development Plan (NDPIV) includes health system strengthening as a priority. The 2025 PEFA assessment is scheduled and will provide updated evidence on PFM system quality. And the Medium-Term Expenditure Framework revision offers a practical window to implement the budget formulation reforms that this review's evidence most strongly supports. The PFM improvements needed are technically feasible, institutionally complex, and politically challenging, the characterisation that applies to almost every meaningful governance reform. But the efficiency gains they would produce, measured in drugs available, services delivered, and outcomes achieved, are documented and substantial. The question is whether the political will exists to achieve them.

VI. IMPLICATIONS OF THE STUDY

This review makes three contributions to the theoretical literature on PFM, health financing, and health system governance. First, it provides Uganda-specific instantiation of the global PFM-health efficiency mechanisms identified by Musiega et al. (2024), demonstrating that these mechanisms operate in Uganda's institutional context with the specific characteristics, decentralisation fragmentation, donor off-budget financing, seasonal expenditure concentration, that generic global frameworks do not capture. Second, it extends the Tapsoba et al. (2024) cross-country quantitative evidence on PFM-health outcomes to the mechanism level for Uganda, identifying the specific budget execution, procurement, accountability, and fiscal transfer pathways through which PFM quality shapes health efficiency. Third, it demonstrates that political economy analysis, as applied by Namakula et al. (2025) to Uganda's health systems, is an indispensable complement to technical PFM analysis, because the barriers to efficiency-improving PFM reform are often political and institutional rather than technical.

For MFPED, the review's most direct policy implication is the need to reform the quarterly budget release schedule for the health sector, front-loading Q1 and Q2 releases to reduce Q4 concentration and give health facilities and districts the cash flow predictability that effective procurement and service planning requires. For the Ministry of Health, the review argues for prioritising NMS procurement reform, specifically, the shift from annual to rolling procurement planning with quarterly stock replenishment cycles that match seasonal disease burden patterns. For development partners, the review provides the evidence base for accelerating the transition from off-budget to on-budget funding modalities, recognising that the short-term governance assurance cost of

channelling funds through Uganda's PFM system is outweighed by the long-term efficiency and sustainability benefits of strengthening rather than bypassing that system.

VII. RECOMMENDATIONS

1. Reform the Health Budget Release Schedule.

The Ministry of Finance, Planning and Economic Development (MFPED) should reform the quarterly budget release schedule for health conditional grants to front-load at least 60% of the annual allocation in the first and second quarters (Q1 and Q2), thereby reducing fourth-quarter (Q4) expenditure concentration to below 25% within two budget cycles. This reform should be operationalised through a revised Treasury Instruction that specifies sector-specific minimum quarterly release floors for the health budget, ensuring that health facilities and district health management teams have predictable cash flow throughout the financial year rather than receiving the bulk of resources in the final quarter when effective utilisation is structurally compromised.

2. Strengthen Financial Systems and Equitable Resource Distribution.

MFPED should accelerate the rollout of the Integrated Financial Management Information System (IFMIS) to achieve at least 90% district connectivity by 2027, with targeted prioritisation of the 30-40% of districts currently operating off-system in the same districts that consistently generate the highest rates of unaccounted-for funds in the Office of the Auditor General (OAG) annual reports. Concurrently, MFPED should revise the intergovernmental health conditional grant formula to incorporate disease burden, poverty incidence, and facility catchment population as core allocation criteria, progressively replacing the historical allocation basis that perpetuates resource inequity across Uganda's 146 districts.

3. Protect the Non-Wage Health Budget through Medium-Term Planning.

MFPED should commission a comprehensive medium-term expenditure review of the health sector's non-wage recurrent budget to establish the minimum resource allocation required for essential drug procurement, health facility operations, and community health worker support across all levels of the health system. The findings of this review should be used to negotiate and establish a binding non-wage health budget floor within the Medium-Term Expenditure Framework (MTEF), ensuring that wage expenditure growth does not continue to crowd out the operational resources on which frontline service delivery directly depends.

4. Reform NMS Procurement and Supply Chain Management.

The Ministry of Health (MoH) should replace the current annual procurement cycle of the National Medical Stores (NMS) with a rolling three-year procurement plan explicitly aligned to seasonal disease burden data and epidemiological projections. This transition should introduce quarterly replenishment orders as the standard supply modality, reducing essential medicine stockout rates and systematically eliminating the 15-30% emergency procurement cost premium that arises when

planning failures force last-minute, non-competitive purchasing a directly avoidable source of allocative inefficiency in the health budget.

5. Close the Audit Compliance Gap through Institutional Accountability.

MoH should establish a dedicated OAG Recommendation Implementation Office within the Directorate of Finance, staffed with sufficient technical capacity to develop mandatory 90-day implementation plans for all OAG health sector audit findings. The office should report implementation progress to the Inspector General of Government on a semi-annual basis, creating a formal accountability loop that converts audit recommendations from unenforced observations into binding institutional obligations directly addressing the 40-60% implementation rate that currently allows financial management weaknesses to persist across successive audit cycles.

6. Scale Facility Financing and Introduce Performance Incentives.

MoH should expand the Direct Health Facility Financing (DHF) programme to cover at least 85% of all public health facilities by 2028, accompanied by strengthened accountability requirements including mandatory quarterly financial reporting to district councils and community health management committees. Simultaneously, MoH should pilot performance-based financing (PBF) in a targeted set of high-burden districts, generating the rigorous efficiency and health outcome evidence needed to design and cost a credible national PBF rollout under the Health Sector Development Plan IV (HSDP IV) for the period 2026-2031.

7. Align Donor Financing with Government Planning and Build District Capacity.

Development partners should commit to a concrete, time-bound timetable for transitioning at least 80% of health sector development assistance to on-budget financing channelled through the Government of Uganda's MTEF by 2030 consistent with the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action that Uganda's development partners have formally endorsed. In parallel, development partners should co-finance a comprehensive district-level financial management capacity building programme, prioritising the approximately 50% of districts whose persistently low budget absorption rates reflect management and skills constraints rather than inadequate resource allocation.

8. Build Uganda-Specific PFM-Health Research Capacity.

The academic and research community should commission longitudinal, causal primary research evaluating the efficiency effects of specific PFM interventions including quarterly release front-loading, DHF scale-up, and NMS procurement reform on measurable health system outcomes in Uganda. This research agenda should include the development and validation of a composite PFM-Health Efficiency Index integrating Public Expenditure and Financial Accountability (PEFA) scores, budget absorption data, and OAG audit compliance rates into a standardised annual monitoring instrument. The research programme should be extended to a comparative East Africa study encompassing Kenya, Tanzania, Rwanda, and South Sudan, and supported by dedicated

postgraduate bursary programmes that build the domestic health economics research capacity needed to sustain Uganda-specific evidence generation beyond the project cycles of international development partners.

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