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Sustainability starts with spending: public financial management lessons from Kenya's universal health care pilot

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Abstract

Background Effective public financial management (PFM) is a foundational enabler of sustainable progress toward Universal Health Coverage (UHC). Achieving UHC requires not only increased funding for the health sector but also the efficient, equitable, and accountable use of resources. In 2019, Kenya piloted a UHC initiative across four counties to generate evidence to inform national scale-up. This study examines the PFM processes underpinning the pilot implementation, with a focus on how financial planning, budget execution, and accountability mechanisms influenced the delivery of UHC interventions at the county level.

Methods This study employed a qualitative research design to explore PFM processes during the implementation of Kenya's UHC pilot in four counties. Data were collected through 51 in-depth interviews and five focus group discussions with key stakeholders, including healthcare workers, patient representatives, and senior members of the County Health Management Teams (CHMTs). An inductive thematic analysis approach was employed to identify patterns and themes that emerged from the data. The analysis was facilitated using Dedoose software (Version 9.0.17), which enabled systematic coding and organization of the qualitative data.

Results The UHC pilot program in Kenya featured a hybrid planning model, combining top-down directives from the national government with bottom-up inputs from county stakeholders. Despite this collaborative approach, county budgeting processes remained governed by the stipulations of the PFM Act. While counties welcomed additional UHC funds, the removal of user fees led to reduced facility-level revenue, increased service demand, and strain on human and material resources. Delays in fund disbursement, rigid budget structures, and limited financial autonomy further constrained implementation. These experiences underscore the need for a more coherent integration of PFM and health financing policies at the subnational level to ensure sustainable and equitable health service delivery.

Conclusion The UHC pilot offers critical lessons for future health financing reforms. Addressing PFM bottlenecks—particularly those related to timely disbursement, budget flexibility, and local revenue generation—is essential to ensure the sustainability of UHC in Kenya and similar contexts. The study's limitations necessitate further research before scaling up nationwide.

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Keywords Immunization, Kenya, Public financial management, UHC financing, County planning and budget, Sustainability, Decentralization, Devolution

Introduction

Globally, effective PFM is widely recognized as a cornerstone of efficient and equitable health systems [1]. Public Financial Management (PFM) encompasses the rules, institutions, and processes that govern the collection, allocation, use, and accountability of public resources, typically structured around the budget cycle, which includes formulation, execution, and evaluation [2–4]. According to the World Health Organization (WHO), PFM influences health system performance through three primary channels: the level and allocation of public funds, the efficiency of spending, and the flexibility of fund use [5]. Inadequate resource allocation, misalignment between budgets and policy priorities, and rigid budget structures often result in inefficiencies and service delivery gaps [6]. In response, the Global Action Plan Sustainable Financing Accelerator has called for targeted PFM reforms in the health sector, with a particular emphasis on policy-based and program-based budgeting [7].

Across sub-Saharan Africa, countries have adopted decentralization as a governance reform aimed at improving service delivery, accountability, and responsiveness. However, the implementation of PFM reforms has been uneven [8]. While high-income countries have institutionalized program-based budgeting to enhance flexibility and resource alignment, many low- and middle-income countries (LMICs) in Africa remain in transition. Only 18% of the 41 African countries have adopted program-based budgeting, and just a few, including Kenya, Burkina Faso, Gabon, Mauritius, and South Africa, have institutionalized these reforms [9]. Persistent challenges include underspending, weak prioritization, and inequitable resource allocation, particularly the overemphasis on secondary and tertiary care at the expense of primary healthcare [2]. Moreover, decentralization has often introduced fragmentation in budgeting processes, with limited coordination between central and subnational governments [10, 11].

Kenya is a lower-middle-income country located in East Africa, with a population of approximately 47.6 million, as reported in the 2019 Population and Housing Census [12]. The country is administratively divided into 47 counties, which vary significantly in population size. The most populous counties include Nairobi, Kiambu, Nakuru, Kakamega, and Bungoma [12]. Following the promulgation of the 2010 Constitution, Kenya undertook a major governance reform in 2013, transitioning from a centralized to a devolved system of government. This reform introduced a two-tier structure comprising a national government and 47 county governments, each with distinct but interdependent mandates [13]. The Fourth Schedule of the Constitution outlines the functions of each level of government, with counties assuming responsibility for key service delivery sectors, including health [14]. The principle of "consultation and cooperation" governs the relationship between the two levels of government.

The rationale for devolution included improving equity, enhancing accountability, and aligning services with local needs [10]. However, the transition has been marked by coordination challenges between national and county governments, particularly in aligning health financing mechanisms with decentralized governance structures [11, 15, 16]. Counties receive funding through national block grants and locally generated revenue, but disparities in local revenue capacity have led to variations in health sector funding across counties [17]. In the health sector, this has involved transferring decision-making authority over resource allocation and service delivery to county governments. Governance structures such as Facility Management Committees (FMCs) and District/Hospital Management Boards (D/HMBs)—comprising elected community representatives and appointed officials—were established to provide oversight and community participation in health planning and budgeting [18]. The institutional framework of county governments includes two arms: (i) the County Executive, led by an elected Governor and Deputy Governor, responsible for implementing devolved functions; and (ii) the County Assembly (CA), composed of elected Members of the County Assembly (MCAs) representing electoral wards, along with nominated members representing special interest groups such as women, youth, and persons with disabilities. The allocation of nominated seats is proportional to party representation within the CA [13].

Kenya's healthcare system is organized in a hierarchical structure comprising six levels of care. It begins at the community level (Level 1), where community health workers provide basic services such as health education and disease prevention. Levels 2 and 3 include dispensaries, private clinics, and health centers that offer outpatient care, maternal health services, and minor surgeries. Secondary care is provided at Level 4 through sub-county hospitals, while Level 5 county referral hospitals offer specialized and advanced medical services. The highest level, Level 6, comprises national referral hospitals that provide highly specialized care and are managed by the national government [19]. Before devolution, community and subnational stakeholders had limited involvement

in health sector planning and budgeting, often resulting in a disconnect between local needs and centrally determined priorities [20]. While devolution has theoretically addressed these top-down planning limitations, empirical studies have identified persistent challenges at the county level, including limited technical capacity for planning and budgeting, politicization of health sector priorities, and weak coordination mechanisms [21–23].

Kenya, like many countries, has adopted UHC as a national policy priority, aligned with Sustainable Development Goal 3.8 [24]. Kenya has implemented a series of health sector reforms aimed at achieving Universal Health Coverage (UHC), a key component of Sustainable Development Goal 3.8 [25, 26]. In 2017, the government committed to achieving Universal Health Coverage (UHC) by 2022 as part of the President's Big Four Agenda [27], which prioritized expanding access to essential health services and reducing out-of-pocket expenditures. Despite notable progress, the country continues to face significant challenges, including constrained fiscal space, a high disease burden, and widespread poverty, which limit access to healthcare for low-income households [28].

Kenya's UHC strategy is anchored on three pillars: (a) publicly financed primary healthcare services, including preventive, promotive, outpatient, and basic diagnostic services; (b) a Social Health Insurance Fund (SHIF) administered by the National Health Insurance Fund (NHIF); and (c) a national fund for chronic and catastrophic illnesses, covering conditions such as cancer, diabetes, stroke, and pandemics [29]. This fund is financed through a combination of government allocations and insurance levies [10]. As part of the Big Four Agenda [30, 31],. The government launched a UHC pilot program in December 2018 to assess the feasibility of eliminating user fees in public health facilities. Four counties were selected based on specific health indicators: Machakos (high incidence of injuries), Nyeri (prevalence of non-communicable diseases), Isiolo (nomadic population dynamics), and Kisumu (high burden of infectious diseases such as HIV/AIDS and tuberculosis) [32].

The pilot program was funded by the national government, which required county governments to eliminate user fees at level 4 and 5 health facilities. In exchange, the national government committed to reimbursing counties for the resulting loss in revenue [33]. The distribution of funds was structured as follows: 72% was allocated to the provision of basic and specialized healthcare services, 15% to health systems strengthening, 12% to community health services, and 1% to public health initiatives [34]. Within the allocation for basic and specialized care, 70% was directed to the Kenya Medical Supplies Authority (KEMSA) for the procurement of essential medical equipment, pharmaceuticals, and related supplies. The remaining 30% supported operational costs and maintenance of level 4 and 5 health facilities [35]. A significant portion of the health systems strengthening budget was utilized to hire healthcare personnel on a contractual basis. Community health service funds were primarily used for training and equipping community health volunteers. Meanwhile, the allocation for public health services was channeled to county health management teams to support quality assurance, data collection, and disease surveillance activities.

The pilot aimed to deliver a defined package of health services at no cost to patients, with the government assuming full financial responsibility for these services. The pilot concluded in 2019, generating critical lessons to inform the national scale-up of UHC across all 47 counties. The articulation between decentralization and health financing policy at the county level is crucial to achieving UHC [36]. The 2019 UHC pilot program presented both opportunities and challenges in aligning PFM processes with health financing objectives. Although the national government led the pilot, it was operationalized through existing county-level PFM systems. Previous studies have examined broader PFM issues in Kenya's health sector [15, 34, 37], but there is a gap remaining in understanding further the specific PFM experiences during the UHC pilot, especially about the diverse contexts in the four counties. This study, therefore, aimed to examine the PFM experiences encountered during the implementation of the UHC pilot program in four counties in Kenya. Specifically, the study aimed to (a) explore the role of county-level PFM systems in the planning, allocation, and utilization of UHC pilot funds and (b) identify key PFM-related constraints and enablers that will affect the implementation and sustainability of countrywide UHC programs in the future.

Methods

Study setting

Kenya is a lower-middle-income economy located in East Africa, with an estimated population of 55.1 million as of 2023 [26]. This study was conducted in Kisumu, Machakos, Isiolo, and Nyeri counties in Kenya.

Machakos is a semi-urban county located in Kenya's Eastern region. As of the 2019 census, the population was approximately 1.42 million. The county has relatively high health service coverage, with over 90% of births attended by skilled health personnel. Immunization coverage for children under one year exceeds 85%, and the contraceptive prevalence rate is among the highest nationally. However, non-communicable diseases (NCDs), particularly injuries from road traffic accidents, are a growing concern [38].

Isiolo is a sparsely populated, arid county in northern Kenya, with a population of approximately 268,000.

Table 1 Respondents' characteristics

Characteristics	Variable	Frequency	Percentage (%)
County	Isiolo	6	17.7
	Kisumu	10	29.4
	Machakos	7	20.6
	Nyeri	11	32.5
Gender	Male	20	58.9
	Female	14	41.1
Place of work	County Government	12	35.3
	Health Facility	22	64.7
Primary role	County officer	12	35.3
	EPI/MCH	5	14.7
	Facility Administrators	7	20.6
	Health Care Service Provider	10	29.4

It is characterized by nomadic pastoralist communities, which pose unique challenges for health service delivery. Skilled birth attendance remains below the national average, and immunization coverage is comparatively low. The county also experiences high rates of maternal and child mortality, and access to health facilities is limited due to geographic and infrastructural barriers [39].

Nyeri, located in the Central region, has a population of about 759,000 and is one of the most urbanized counties in Kenya. It has a robust health infrastructure and high rates of health service utilization. Skilled birth attendance and immunization coverage are both above 90%. However, the county has a high burden of non-communicable diseases, particularly diabetes and hypertension, which are leading causes of outpatient visits and hospital admissions [40].

Kisumu, situated in the western region along Lake Victoria, has a population of approximately 1.16 million. The county faces a dual burden of disease, with a high prevalence of infectious diseases such as HIV/AIDS and tuberculosis, alongside rising NCDs. HIV prevalence in Kisumu is among the highest in the country, estimated at over 16%. Despite this, the county has made significant progress in expanding access to antiretroviral therapy and maternal health services [41].

Study design and participant selection

The study employed a cross-sectional, qualitative design involving interviews with senior county Department of Health officials in the four pilot counties. This qualitative study conducted in-depth interviews (IDIs) with key informants. A purposive sampling strategy was employed to select participants who were directly involved in implementing the UHC pilot program. These included members of the County Health Management Teams (CHMTs), Sub-County Health Management Teams (SCHMTs), hospital administrators, and departmental heads. In total, 51 stakeholders were interviewed, representing a diverse range of perspectives across the county health system. Table 1 below shows the distribution of participants across the four counties.

Data collection

Data collection was conducted between August 2021 and January 2022. JOO and MO, two experienced researchers with expertise in public financial management and qualitative methods, conducted in-depth interviews using a semi-structured interview guide. This followed the provision of informed consent by all participants, and interviews were held in quiet, private settings chosen by the participants to ensure comfort and confidentiality. All interviews were conducted in English and lasted between 30 and 60 min. Audio recordings of the interviews were made with participants' permission and subsequently transcribed verbatim by AOA, JOO, and CA.

Data analysis

An inductive thematic analysis approach was applied to identify emerging themes from the data following the steps outlined by Braun and Clarke [42]. The team familiarised themselves with the interview data by participating in the data collection (JOO), transcribing the interview audios (JOO, AOA, and CA), and then reading all the transcripts (JOO, AOA, CA, SK, SO, RN, and CN) several times and taking note of initial ideas [43]. Three team members (AOA, JOO, and CA) coded the initial set of five transcripts and discussed and agreed on the initial codebook, which was then applied to the remaining transcripts. Additional codes were developed inductively based on patterns that emerged within the transcripts during the coding process. Related codes were charted and grouped into emerging themes, and these findings were reported in a narrative format. Dedoose Version 9.0.17 software was used to facilitate the data coding and analysis [43].

Findings

Community registration, service uptake, and systemic pressures

Community-based enrolment and out-of-pocket payments

The UHC pilot program began with the registration of eligible residents across the four participating counties. Community health promoters facilitated enrolment using a mobile phone application, and registration cards were issued upon verification of identity through a national ID, birth certificate, or a letter from the local chief. Eligibility was contingent upon prior registration with the National Health Insurance Fund (NHIF), ensuring that only NHIF-registered individuals could access services under the pilot.

"If you came, we registered you so long as you had the needed requirements. The ID, the birth certificate, or a letter from the chief… Registration was through phones, and you would dial 253#…" (FGD-01-21).

Enrolled individuals were entitled to receive a defined package of healthcare services free of charge at public health facilities. However, services not available within the public sector—such as advanced imaging and specialized laboratory diagnostics—were not covered and had to be paid for out of pocket at private facilities.

"He was being treated for everything but for tests that required a lot of money, that UHC didn't pay for… like head scans, stomach… one would come, he was told to go and take them outside the hospital…" (FGD-07-21).

Increased service utilization led to systemic pressure

The removal of user fees led to a significant increase in health-seeking behavior, resulting in higher patient volumes at public facilities. This surge placed considerable strain on existing infrastructure and human resources, prompting counties to recruit additional healthcare workers to manage the increased workload.

"Because when everyone heard that there were free services, all those patients with chronic conditions… all wanted to be managed in Provincial General Hospital." (ID-21-21).
"Some more staff were employed through that fund… But of course, it wasn't commensurate with the workload." (ID-25-21).

To ensure continuity of care, financial grants were provided to national referral hospitals, enabling referred patients to continue receiving services at no additional cost. This policy aimed to maintain equity and access across all levels of the health system.

"The government paid for it, and the mwananchi was to get the services free of charge at whatever level… even at Level 6." (KI-27-21).

Despite the availability of essential medicines, the increased patient load exposed limitations in facility infrastructure. Overcrowding and space shortages were reported, which affected the quality of care and patient experience.

"…patients would often share beds because drugs were available and free, leading to a high volume of patients. However, space was limited." (ID-02-21).

Planning and budget formulation across governance levels

Facility-level needs assessment and usual annual work planning (AWP) continued

The planning and budgeting process for the UHC pilot began at the facility level with a structured needs assessment and prioritization exercise. Each department within the health facility—such as nursing, laboratory, and pharmacy—developed its budget proposal, which was then consolidated into an annual work plan. This process typically commenced in April and was finalized before the end of the fiscal year on June 30th.

"When planning, every department makes its budgeting… we sit as departments, and each department brings its budget, then we write proposals… and forward them to the county." (ID-10-21).
"We need first to identify our needs and then… look at the resources that we've been given. Of course, the resources are never enough." (ID-21-21).

Once departmental work plans were developed, they were reviewed by internal governance structures such as the Hospital Management Board or the Executive Expenditure Committee (EEC). These bodies had the authority to adjust the proposed budgets based on projected financial availability or strategic priorities before submission to the county health department.

"We meet a small committee called the EEC… we deliberate on the priorities and allocate these resources in different vote heads… then present the budget to the hospital management team." (ID-21-21).

County-level budget consolidation and public input were followed by submission to the national level and conditional disbursement

At the county level, facility budgets were consolidated to inform the overall county health budget. Adjustments were made based on available resources, equity considerations across facilities, and public input. The County Health Services Fund Board played a key role in reviewing proposals and incorporating community concerns.

"The County Management Fund Board… look at them from the perspectives of the whole county… and may have concerns from the community. That board also has the right to make some adjustments, of course, with justification." (ID-25-21).

Following county-level consolidation, the health budgets were submitted to the Ministry of Health for approval. The Ministry then forwarded the approved budgets to the National Treasury for the disbursement of UHC funds.

While the first-quarter disbursement was based solely on approved budgets, subsequent disbursements required financial accountability reports for the previous quarter.

"The proposed budget [was] sent to the ministry… the ministry looked at it, probably ratified it, and then sent it to the treasury for disbursement." (ID-35-21).
"We were to spend 91 million, account for it, then the Ministry of Health would give another disbursement… our county had not got the second disbursement because of the first disbursement." (KI-04-21).

Budget execution and fund flow mechanisms

Dual financing structure, fund allocation, transfers, and procurement

The UHC pilot program adopted a two-tier PFM model, with funding contributions from both the national and county governments. While the national government provided the bulk of the UHC funds, counties were expected to supplement these with allocations from their existing health budgets. Approximately 70% of the UHC funds were managed centrally by the national government through the Kenya Medical Supplies Agency (KEMSA), primarily for the procurement of drugs and non-pharmaceuticals. The remaining 30% was transferred to county-level special UHC accounts, with strict guidelines on eligible expenditures.

"The agreement with the National government was that funding was still going to be there on top of what the government was going to prepare." (KI-38-21).
"The money for the drugs was sent to KEMSA… to supply drugs and pharmaceuticals, laboratory consumables, and X-ray consumables." (KI-03-21).
"Funds were later sent to the county with clear guidelines on what they are supposed to be implemented." (KI-05-21).

Delayed disbursements despite the designated use of county-level UHC funds and the need for supplementary budgeting

Thirty percent of the funds deposited into county UHC accounts were earmarked for specific purposes, including payment of UHC staff salaries, health system strengthening, public health services, and operational costs. Designated county officials jointly managed these accounts to ensure compliance with national directives. Since UHC funds were disbursed after counties had finalized their annual budgets, they had to be incorporated through supplementary budgeting processes. This led to delays in fund utilization, as county assemblies had to approve the revised budgets before expenditures could be made.

"The funds used to be sent to a special UHC account… for supervision, day-to-day running… and only meant for this hospital and one more." (KI-38-21)."There are some components… public health, community, systems strengthening, and basic materials." (KI-03-21).
"This money had to be factored into our budget… as a supplementary budget for 2018/2019… it took some time." (KI-03-21).

Facility-level allocation, loss of facility improvement funds, operational use of funds, and constraints

Once approved, funds were allocated to individual health facilities based on their submitted budgets. These allocations were used for operational expenses such as casual staff wages and minor facility upkeep. However, the funds were often insufficient to cover facility needs fully. The elimination of user fees under UHC meant that facilities could no longer collect Facility Improvement Funds (FIF), which had previously supported operational flexibility. This created financial strain, mainly when KEMSA did not supply certain essential commodities, which facilities were then unable to procure independently. To mitigate the burden on high-level referral hospitals receiving patients from multiple counties, the national government provided direct grants to these facilities. These grants were intended to offset the loss of revenue and meet the increased demand for services.

"We met the budget at the county level and allocated this money… However, what was allocated was like a third of the budget of each facility." (KI-05-21).
"The facility has a bank account… used to cater for some of the needs… like paying for the salaries for the casuals and also… buying tea." (ID-34-21).
"It's almost like a business that you are not selling, and you are constantly giving to customers… it became constantly worse." (ID-30-21).
"They were getting a direct grant from the National Government… to bridge the gap of what was now remaining." (KI-05-21).

Budget evaluation

Justification of budget allocation and compliance with government financial reporting and auditing guidelines

Participants emphasized the importance of reviewing previous work plans and achievements to justify new budget allocations. There is a clear expectation that county officials must present data on past performance to support future funding requests. Budget processes are generally approved if they align with government regulations on collection, utilization, and accountability. Regular audits are a key mechanism for ensuring compliance. Monthly financial reports are consistently prepared,

regardless of the level of economic activity, and are consolidated for annual audits. The emphasis is on maintaining proper documentation to avoid audit queries.

"You need to give data about the year, which is ending, and what your targets were, how much you have achieved, because that is what will be used to justify giving your finances." — ID-47-21.
"It's as if we have blanket approval. So long as the processes of collection, utilization, and accountability are in line with the government guidelines. And of course we are audited all the time." — ID-25-21.
"We prepare financial reports every month, regardless of whether there is money or not. And we evaluate that, which is audited annually." — ID-26-21.
"They are managed properly so that we avoid the audit queries that come out." — KI-03-21.

Public financial management challenges during UHC

Delayed, insufficient, and irregular budget releases

Delayed submissions by county governments and iterative fund release processes led to late disbursements. Supplementary budget approvals were required after counties had already passed their annual budgets, causing further delays. Sequential disbursement conditions (i.e., requiring spending and accounting for one quarter before receiving the next quarter's funds) created bottlenecks.

"We submitted somewhere in May... the county delayed submitting on financial closure somewhere in June... impacted the fourth quarter disbursement." — ID-35-21.
"This quarter, one money 91 million dollars, which we did not spend until the end of the financial year." —KI-04-21.

Lack of autonomy and involvement of health facilities

Facilities lacked autonomy in spending and were excluded from planning and budgeting processes. There was no clear breakdown of budget allocations at the facility level, limiting transparency and accountability.

"We don't have a figure that I can put into my hand and say that was our budget." — ID-35-21.

Stockouts and supply chain failures

Inconsistent budget releases led to stockouts of essential drugs and supplies. KEMSA's failure to supply lab reagents and diagnostic consumables forced patients to seek services in the private sector, thereby undermining the goals of UHC.

"The program did not budget for laboratory reagents... diagnostics suffered... encouraged out-of-pocket expenditure." — KI-05-21.

Loss of user fees and accumulation of debt

Facilities could not charge user fees under UHC, removing a key source of operational funds. To cope, they acquired supplies of credit, leading to debt accumulation. Some countries continued to offer free services even after national funding ended due to political motivations and worsening financial strain.

"We had already accrued a lot of debt... from electricity, water, suppliers..." — KI-01-21.
"Nobody told us to stop... Our governor looked so good to his constituency." — ID-21-21.

Discussion

This study explored the PFM experiences and challenges encountered during the UHC pilot program in four Kenyan counties. The UHC pilot program was aligned with the constitutional mandate under the 2010 Bill of Rights, which guarantees every Kenyan the right to the highest attainable standard of health. The program aimed to eliminate OOP expenditures by providing free access to quality healthcare services. However, despite this objective, the study found that OOP expenditures persisted, particularly for diagnostic services. This was primarily due to frequent stockouts of laboratory reagents and the exclusion of specialized referral services from the program's coverage. These findings are consistent with previous studies that highlight the persistent burden of OOP expenditures in Kenya despite policy interventions [44–46].

From a PFM perspective, the study revealed that planning and budgeting processes were initiated at the facility level through the development of AWPs, which were then consolidated at the county level. However, the timing of UHC fund disbursements was misaligned with county budget cycles. The first tranche of UHC funds was released after county assemblies had approved their annual budgets, necessitating supplementary budget approvals that delayed the utilization of the funds. This misalignment undermined the efficiency of budget execution and is reflective of broader coordination challenges between national and county governments [40] and other studies [18, 47, 48].

The execution of the UHC budget was predominantly supply-based, with approximately 70% of funds allocated to health products and technologies (HPTs) procured through the Kenya Medical Supplies Authority (KEMSA). While this approach temporarily improved the availability of essential commodities, it lacked flexibility and responsiveness to facility-specific needs. Facilities were

not involved in procurement decisions, leading to mismatches between supplied items and actual demand, particularly in diagnostics and imaging. These findings align with concerns raised in prior research regarding the limitations of centralized procurement models in dynamic healthcare environments [44, 46].

Moreover, the study identified significant delays and irregularities in the disbursement of funds. Counties were required to fully expend an account for each quarterly disbursement before receiving subsequent tranches. This sequential funding model created bottlenecks, resulting in service interruptions and the accumulation of pending bills. The lack of timely and predictable funding flows is a recurring theme in health financing literature across low- and middle-income countries [49–51].

A critical challenge identified was the erosion of financial autonomy at the facility level. The suspension of user fees under UHC removed a key source of operational revenue, yet facilities were not granted control over alternative funding streams. Consequently, many facilities resorted to credit-based procurement, leading to significant debt accumulation. This lack of autonomy, coupled with limited involvement in budgeting and procurement, undermined both accountability and the efficiency of service delivery. Similar dynamics have been documented in other Kenyan counties, where centralized decision-making has led to a misalignment between resource allocation and service delivery needs [52, 53].

Budget oversight and evaluation processes were found to be weak. Although monthly financial reporting and annual audits were conducted, there was limited evidence of structured budget evaluation to inform future planning. This reflects a broader trend of declining budget oversight in sub-Saharan Africa [9] and highlights the need to institutionalize robust monitoring and evaluation mechanisms within the health financing framework.

Our findings suggest that while the pilot aimed to reduce financial barriers to healthcare, patients seem to have continued incurring OOP payments due to the lack of coverage for specific services and stockouts of supplies. Previous analyses reported mixed and context-dependent results. For example, the review by the International Trade Administration [54] reported a reduction in OOP payments for households, for services like outpatient care and maternal health, where utilization increased due to reduced cost barriers. Although our study did not specifically assess OOP payment levels by county, it is likely that households from pilot counties with stronger health systems and better planning capacity would incur lower OOP payments than those from counties with poor planning and coordination. This is an important finding to consider when expanding UHC nationally in Kenya [55, 56].

Finally, the study observed instances where counties continued to offer free services beyond the official end of the UHC pilot, driven by political motivations. This placed additional strain on county budgets and exacerbated facility-level debt. The politicization of health service delivery has been widely documented as a barrier to sustainable health financing reforms [37, 50, 57].

One critical aspect of PFM that warrants further attention is the capacity of health facilities and county health departments to formulate and execute budgets effectively. While much of the previous discourse has focused on structural issues—such as the misalignment between UHC fund flows and county budget cycles, or the delays in fund disbursement—there has been relatively little emphasis on the internal capacity constraints within these institutions as part of future expansion of UHC. As seen in this study and others [37, 58], counties faced issues such as limited technical expertise, inadequate planning tools, and weak financial management systems at both the facility and sub-county levels. Addressing these capacity gaps is essential for ensuring that resources are not only allocated but also utilized efficiently to improve health service delivery.

The findings of this study offer several lessons for the national scale-up of UHC in Kenya. The following actions are recommended: (a) Synchronize budget cycles by aligning national and county budget planning and approval timelines, which is essential to ensure timely fund disbursement and utilization; (b) Enhance facility autonomy by granting health facilities greater control over financial resources, which can improve responsiveness and accountability; (c) Adopt flexible procurement models by using a hybrid procurement approach that combines centralized and facility-level purchasing may better address diverse and evolving service delivery needs; (d) Institutionalize budget evaluation by strengthening budget oversight and integrating evaluation into the budget cycle can enhance learning and resource optimization; (e) And ensure sustainable financing by developing long-term, blended financing strategies that include national, county, and donor contributions are critical for sustaining UHC.

Strengths and Limitations

This study is the first to systematically focus on the PFM processes during the implementation of Kenya's UHC pilot program. It represents a pioneering effort to explicitly link PFM practices with UHC policy objectives in the Kenyan context. As such, it provides foundational evidence to inform future PFM reforms aimed at aligning financial systems with the goals of UHC, offering a valuable reference point for subsequent research and policy development.

Despite these contributions, several limitations should be acknowledged. The study was conducted in four counties, which limits the generalizability of the findings. Kenya's counties differ significantly in terms of disease burden, governance capacity, and PFM implementation, which may influence the applicability of these findings to other contexts. Additionally, while the study identified structural misalignments between UHC fund flows and county budget processes, it did not extensively explore the underlying capacity constraints within county health departments and health facilities. Understanding the institutional capacity to formulate, execute, and monitor budgets is crucial for effective PFM and warrants further investigation. Moreover, although the UHC pilot aimed to eliminate OOP expenses, the study did not systematically document the extent or impact of such spending during the pilot phase.

Conclusion

The UHC pilot program in Kenya marked a significant step toward achieving equitable access to healthcare by delivering free services to all residents in the four participating counties. The initiative temporarily improved the flow of resources and enhanced the availability of essential medicines, contributing to better service quality and utilization. However, systemic PFM challenges hindered the efficiency and effectiveness of service delivery. Key issues included delayed and irregular fund disbursements, rigid budget classifications, and limited flexibility in budget execution. These challenges, compounded by increased demand for services, led to shortages of health products and technologies and constrained the operations of facilities. Moreover, the lack of autonomy at the facility level and the supply-based procurement model limited responsiveness to local needs.

To ensure the success of future UHC initiatives or a UHC scale-up, it is imperative to adjust PFM systems to promote timely, sufficient, and flexible financing. Strengthening budget planning, execution, and oversight—alongside exploring sustainable health financing mechanisms—will be critical. Drawing lessons from the pilot, Kenya should prioritize scaling up UHC nationwide, accompanied by a robust and responsive PFM framework, to accelerate progress toward achieving UHC by 2030.

Abbreviations

AMREF	African Medical and Research Foundation
AWP	Annual Work Plans
BCG	Bacillus Calmette-Guérin (vaccine)
CDOH	County Department of Health
CHA	Community Health Assistant
CHMT	County Health Management Team
SCHMT	Sub-County Health Management Teams (SCHMTs)
CHVs	Community Health Volunteer
CRF	County Revenue Fund
FGD	Focus Group Discussion
ID	Identification
IDI	In-Depth Interview
KI	Key Informant
KEMSA	Kenya Medical Supply Authority
LMICs	Low- and Middle-Income Countries
MoH	Ministry of Health
MU-IREC	Moi University Institutional Research and Ethics Committee
NHIF	National Hospital Insurance Fund
OOP	out-of-pocket
PFM	public financial management
PHC	Primary Health Care
SHIF	Social Health Insurance Fund
UHC	Universal Health Coverage
UNICEF	United Nations International Children's Emergency Fund
US	United States
WHO	World Health Organization

Supplementary Information

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Supplementary Material 1.

Supplementary Material 2.

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Clinical trial number

Not applicable.

Authors' contributions

AOA and JOO conceptualized the study. JOO conducted the qualitative interviews with the help of a research assistant. JOO, AOA and CA transcribed the interview data. AOA, JOO, CA and SKT analysed the data. AOA, JOO, and PO were responsible for the administrative and logistics during the study. DJ provided the technical advice and supervision during the study. AOA, SKT, CA and JOO wrote the initial draft of the manuscript. All authors critically read, revised and approved the final version of the manuscript for publication.

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Data availability

Data collected will be made available upon request through the corresponding author.

Declarations

Ethics approval and consent to participate

All procedures conducted in this study adhered to the ethical principles outlined in the Declaration of Helsinki. Ethical approval for this study was obtained from the Moi University Institutional Research and Ethics Committee (MU-IREC) under approval number 0003605.
Before participation, all respondents were provided with an information sheet detailing the study's objectives, methodology, potential benefits and risks, the intended use of the data, and the contact information of the research team. Participants were allowed to ask questions, and informed consent was obtained through their signature on a consent form. The interview guide used in this study will be submitted as a supplementary file.

Consent for publication

Not applicable.

Competing interests
The authors declare no competing interests.

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References

1. Ravishankar N, Mathauer I, Barroy H, Vîlcu I, Chaitkin M, Offosse MJ et al. Joseph Kutzin - Reconciling devolution with health financing and public financial management: challenges and policy options for the health sector. BMJ Global Health. 2024;9(5):e015216.
2. Cashin C. Aligning Public Financial Management and health financing: Sustaining progress toward universal health coverage. apps.who.int. 2017.
3. Tapsoba Y, Silim A, Frimpong KA, Barroy H. Does public financial management save life? Evidence from a quantitative review of PFM and health outcomes in sub-Saharan African countries. Health Syst Reform. 2024;10(1):2298190.
4. Chakraborty S, Dougherty O, Panopoulou S, Cvikl P, Cashin M. Aligning public expenditure and financial management with Health Financing Reforms. Kutzin J, Cashin C, Jakab M, editors. Copenhagen Denmark. 2010.
5. Barroy H, Yameogo P, Blecher M, Sabignoso M, Piatti M, Kutzin J. Public financial management: A pathway to universal health coverage in low-and-middle income countries. Health Syst Reform. 2024;10(3):2368051.
6. Musiega A, Tsofa B, Barasa E. How does public financial management (PFM) influence health system efficiency: A scoping review. Wellcome Open Res. 2024;9:566.
7. Accelerator Discussion Paper 1. Sustainable Financing Developed by: Contributions from: Disclaimer: Introduction Global Fund and World Bank Group Gavi. https://www.who.int/docs/default-source/global-action-plan/accelerator-paper-1.pdf?sfvrsn=1e84ed11_2.
8. Economic WA. Monetary Union. procedures) dialogue to examine the status of PBB in the. Available from: https://www.cabri-sbo.org/uploads/files/Documents/CABRI-Policy-Brief-Programme-Based-Budgeting-ENG-FINAL.pdf . Cited 2025 Jun 18.
9. Barroy H, Kabaniha G, Boudreaux C, Cammack T. Leveraging Public Financial Management for Better Health in Africa. 2019. Available from: https://apps.who.int/iris/bitstream/handle/10665/339297/WHO-UHC-HGF-HFWorkingPaper-19.2-eng.pdf?sequence=1
10. Chaitkin M, Ileana V, Nirmala R, Hélène B, Nadhila A, Pura AC, et al. Implications decentralization public financial management reforms health systems: lessons from Burkina faso, indonesia, kenya, mozambique, nigeria, the philippines, tanzania, and Uganda. Thinkwell. 2022.
11. Ravishankar N, Mathauer I, Barroy H, Vîlcu I, Chaitkin M, Offosse MJ, et al. Reconciling devolution with health financing and public financial management: challenges and policy options for the health sector. BMJ Glob Health. 2024;9(5):e015216.
12. Kenya National Bureau of Statistics (KNBS). 2019 Kenya population and housing census Volume I: Population by County and sub-county. 2019. Available from: https://www.knbs.or.ke/wp-content/uploads/2023/09/2019-Kenya-population-and-Housing-Census-Volume-1-Population-By-County-And-Sub-County.pdf
13. Government Of Kenya. Constitution of kenya, 2010. Guide A. editor. Independently Published. 2021;264.
14. Republic of Kenya. The Constitution of Kenya, 2010. 2010. Available from: http://www.kenyalaw.org:8181/exist/kenyalex/actview.xql?actid=Const2010
15. Kairu A, Orangi S, Mbuthia B, Ondera J, Ravishankar N, Barasa E. Examining health facility financing in Kenya in the context of devolution. BMC Health Serv Res. 2021;21(1):1086.
16. Kipruto H. The Effect of Devolution on Monitoring and Evaluation of Health Services in Kenya: A Case Study of the County Level of Government in Bungoma and Baringo. Available from: http://oldrepo.daystar.ac.ke/xmlui/handle/123456789/3397.
17. Tsofa B, Waweru E, Munywoki J, Soe K, Rodriguez DC, Koon AD. Political economy analysis of sub-national health sector planning and budgeting: A case study of three counties in Kenya. PLOS Glob Public Health. 2023;3(1):e0001401.
18. McCollum R, Limato R, Otiso L, Theobald S, Taegtmeyer M. Health system governance following devolution: comparing experiences of decentralisation in Kenya and Indonesia. BMJ Glob Health. 2018;3(5):e000939.
19. Republic Of K. Ministry of health; nairobi: 2014. Kenya health sector referral implementation guidelines.https://www.measureevaluation.org/pima/referral-systems/referral-guidelines.
20. Okech TC, Lelegwe SL. Analysis of universal health coverage and equity on health care in Kenya. Glob J Health Sci. 2015;8(7):218–27.
21. Njuguna DK, Wangia E, Wainaina S, Ndavi TW. Budgeting at the County level in kenya: what has worked, challenges and recommendations. Public Health Res. 2020;10(2):58–63.
22. Hipgrave DB, Alderman KB, Anderson I, Soto EJ. Health sector priority setting at the meso-level in lower- and middle-income countries: lessons learned, available options, and suggested steps. Soc Sci Med. 2014;102:190–200.
23. Tsofa B, Molyneux S, Gilson L, Goodman C. How does decentralisation affect health sector planning and financial management? a case study of early effects of devolution in Kilifi County, Kenya. Int J Equity Health. 2017;16(1). Available from: https://doi.org/10.1186/s12939-017-0649-0
24. Kenya Health Sector Strategic. Plan 2018–2023. Available from: https://extranet.who.int/countryplanningcycles/planning-cycle-files/kenya-health-sector-strategic-plan-2018-2023. Cited 2025 Jun 18.
25. Universal Health Coverage. Available from: https://www.who.int/health-topics/universal-health-coverage. Cited 2025 Jun 18.
26. World Bank Group. 2024. World Development Indicators. Available from: https://databank.worldbank.org/reports.aspx?source=2&country=KEN. Cited 2024 Nov 3.
27. Ng'ang'a W, Mwangangi M, Gatome-Munyua A. Health reforms in pursuit of universal health coverage: lessons from Kenyan bureaucrats. Health Syst Reform. 2024;10(3):2406037.
28. Available from: https://www.nphi.go.ke/sites/default/files/2024-02/DDSR. Cited 2025 Jun 18.
29. Kenya Universal Health Coverage Policy 2020–2030. Available from: http://guidelines.health.go.ke:8000/media/Kenya_Universal_Health_Coverage_Policy_2020__2030.pdf
30. Maobe A. Rethinking the role of financial inclusion in Kenya's Big Four development agenda. SSRN Electron J. 2022. Available from: https://doi.org/10.2139/ssrn.4282594
31. Available from: https://www.president.go.ke/2020/10/31/speech-by-h-e-uhuru-kenyatta-president-of-the-republic-of-kenya-and-commander-in-chief-of-the-kenya-defence-forces-during-the-launch-of-biometric-registration-for-universal-health-coverage-scheme-be/. Cited 2025 Jun 19.
32. County Governments At The Centre of Achieving. Universal Health Care. Available from: https://vision2030.go.ke/county-governments-at-the-centre-of-achieving-universal-health-care/. Cited 2025 Jun 18.
33. Mbuthia B, Vilcu I, Ravishankar N. Think Well. https://thinkwell.global/wpcontent/uploads/2022/06/Health-financing-in-devolved-settings-1.pdf.
34. Mbuthia B, Vîlcu Ieana, Musuva A, Ravishankar N, Strategic Purchasing Africa Resource Centre (SPARC). 2023. Facility autonomy in the age of devolution: county-level arrangements for managing health facility revenue in Kenya. Available from: https://sparc.africa/resource/facility-autonomy-in-the-age-of-devolution-county-level-arrangements-for-managing-health-facility-revenue-in-kenya/. CIted 2024 Nov 3.
35. Republic Of K. Guide to the use of allocated UHC funds. Nairobi. 2018.
36. Piatti-Fünfkirchen M, Schneider P. From stumbling block to enabler: the role of public financial management in health service delivery in Tanzania and Zambia. Health Syst Reform. 2018;4(4):336–45.
37. Adjagba AO, Oguta JO, Akoth C, Wambiya EOA, Nonvignon J, Jackson D. Financing immunisation in kenya: examining bottlenecks in health sector planning and budgeting at the decentralised level. Cost Eff Resour Alloc. 2024;22(1):76.
38. The impact of uhc implementation in Machakos county. Available from: https://maarifa.cog.go.ke/county-initiatives/impact-uhc-implementation-machakos-county#:~:text=The%20County%20Government%20of%20Machakos,Services%2C%20and%20Public%20Health%20Services. Cited 2025 Jun 18.

39. The impact of uhc pilot in Isiolo county. Available from: https://maarifa.cog.go.ke/county-initiatives/impact-uhc-pilot-isiolo-county. Cited 2025 Jun 18.
40. Williams B, CHW Central. 2023. Nyeri County's efforts towards achieving UHC– Cornerstone of leaving no one behind. Available from: https://chwcentral.org/nyeri-countys-efforts-towards-achieving-uhc-cornerstone-of-leaving-no-one-behind/. Cited 2025 Jun 18.
41. Owino L, Wangong'u A, Were N, Maleche A. The missing link in kenya's universal health coverage experiment: a preventive and promotive approach to SRHR. Sex Reprod Health Matters. 2020;28(2):1851347.
42. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.
43. Los Angeles CA. SocioCultural Research Consultants, LLC. Dedoose cloud application for managing, analyzing, and presenting qualitative and mixed method research data. 2021. Available from: http://dedoose.com/
44. Musiega A, Tsofa B, Nyawira L, Njuguna RG, Munywoki J, Hanson K, et al. Examining the influence of budget execution processes on the efficiency of County health systems in Kenya. Health Policy Plan. 2023;38(3):351–62.
45. Ilinca S, Di Giorgio L, Salari P, Chuma J. Socio-economic inequality and inequity in use of health care services in kenya: evidence from the fourth Kenya household health expenditure and utilization survey. Int J Equity Health. 2019;18(1):196.
46. Nyawira L, Machira Y, Munge K, Chuma J, Barasa E. Examining the implementation experience of the universal health coverage pilot in Kenya. Health Syst Reform. 2024;10(3):2418808.
47. Carrin G, James C, Adelhardt M, Doetinchem O, Eriki P, Hassan M. Health financing reform in Kenya-assessing the social health insurance proposal. S Afr Med J. 2007;97(2):130–5.
48. Adjagba AO, Oguta JO, Wambiya EO, Akoth C. Strengthening health financing at sub-national level in kenya: a stakeholder and needs mapping through a mixed methods approach. Pan Afr Med J. 2024;48(186):186.
49. World Health Organization. Public financial management for effective response to health emergencies Key lessons from COVID-19 for balancing flexibility and accountability. World Health Organization. 2022. Available from: https://iris.who.int/bitstream/handle/10665/359143/9789240052574-eng.pdf?sequence=1
50. Oleribe OO, Momoh J, Uzochukwu BS, Mbofana F, Adebiyi A, Barbera T, et al. Identifying key challenges facing healthcare systems in Africa and potential solutions. Int J Gen Med. 2019;12:395–403.
51. County Government Structure in Kenya. Available from: https://icma.org/articles/article/county-government-structure-kenya. Cited 2025 Jun 18.
52. American Journal of Public Policy and Administration ISSN. (Online) Am J Public Policy Adm. 2023;8(1):2520–4696.
53. Maket I, Naibei R. Fiscal decentralization and devolved healthcare service availability outcomes in kenya: evidence from panel dynamic approach. Reg Sci Policy Pract. 2025;100213:100213.
54. International Trade Administration.| Trade.gov [Internet]. susan.lusi@trade.gov. Kenya - Universal Healthcare Coverage. Available from: https://www.trade.gov/market-intelligence/kenya-universal-healthcare-coverage. Cited 2025 Jun 19.
55. Available from: https://repository.kippra.or.ke/server/api/core/bitstreams/52616208-1c37-40d8-b0a3-8ee8c6cfc269/content. Cited 2025 Jun 19.
56. Salari P, Di Giorgio L, Ilinca S, Chuma J. The catastrophic and impoverishing effects of out-of-pocket healthcare payments in Kenya, 2018. BMJ Glob Health. 2019;4. Available from: https://doi.org/10.1136/bmjgh-2019-001809
57. James N, Lawson K, Acharya Y. Evidence on result-based financing in maternal and child health in low- and middle-income countries: a systematic review. Glob Health Res Policy. 2020;5(1):31.
58. Available from: https://internationalbudget.org/wp-content/uploads/Budget-Credibility-In-Kenyas-Counties.pdf. Cited 2025 Jun 19.

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