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The Effects of Health Purchasing Reforms on Equity, Access, Quality of Care, and Financial Protection in Kenya: A Narrative Review

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ABSTRACT

Kenya has implemented several health purchasing reforms to facilitate progress toward universal health coverage. We conducted a narrative review of peer-reviewed and grey literature to examine how these reforms have affected health system outcomes in terms of equity, access, quality of care, and financial protection. We categorized the purchasing reforms we identified into the areas of benefits specification, provider payment, and performance monitoring. We found that the introduction and expansion of benefit packages for maternity, outpatient, and specialized services improved responsiveness to population needs and enhanced protection from financial hardship. However, access to service entitlements was limited by inadequate awareness of the covered services among providers and lack of service availability at contracted facilities. Provider payment reforms increased health facilities' access to funds, which enhanced service delivery, quality of care, and staff motivation. But delays and the perceived inadequacy of payment rates incentivized negative provider behavior, which limited access to care and exposed patients to out-of-pocket payments. We found that performance monitoring reforms improved the quality assurance capacity of the public insurer and enhanced patient safety, service utilization, and quality of care provided by facilities. Although health purchasing reforms have improved access, quality of care, and financial risk protection to some extent in Kenya, they should be aligned and implemented jointly rather than as individual interventions. Measures that policymakers might consider include strengthening communication of health benefits, timely and adequate payment of providers, and enhancing health facility autonomy over the revenues they generate.

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Health; Kenya; purchasing; reforms; review



Introduction

The goal of universal health coverage (UHC) is to ensure that everyone has access to good-quality health services without the risk of financial hardship.¹ Kenya has committed to achieving UHC by the year 2030,² and its UHC policy outlines four objectives: 1) to strengthen access to health services, 2) to ensure the quality of health services, 3) to protect individuals and households from the financial risks of ill health, and 4) to strengthen health system responsiveness.²

Health purchasing—the transfer of pooled funds to health providers so they can provide services to a defined population—is seen as one area in which policy reforms can help achieve health system goals and accelerate progress toward UHC.³ Health purchasing is considered to be passive when it merely entails following predetermined budgets and/or paying invoices.^{1,4} *Strategic health purchasing*, on

the other hand, means intentionally using purchasing arrangements to help achieve health system goals.^{1,4}

Kenya has embraced health purchasing reforms as one way to accelerate progress toward UHC and has implemented a wide range of initiatives to support more strategic health purchasing. These initiatives have entailed designing frameworks to inform strategic purchasing of health services, enhancing benefit package development, using multiple provider payment mechanisms, implementing selective contracting of providers, and enhancing the use of health information systems to inform decision making.⁵ Kenya aims to achieve UHC by expanding health insurance coverage by the National Hospital Insurance Fund (NHIF), the largest health insurer in the country.⁶ NHIF has been a central focus of strategic purchasing reforms, and efforts have been made to enhance its capacity as a strategic purchaser of health services.⁷

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We conducted a narrative review to understand how the reforms, from the year 2000, have influenced health system outcomes and therefore progress toward UHC. Specifically, we aimed to assess the effects of health purchasing reforms on service delivery and the achievement of the health system goals of equity, access, quality of care, and financial protection. We also aimed to identify areas that policymakers can target to ensure effective implementation of reforms aimed at enhancing strategic purchasing.

Health Purchasing Reforms in Kenya

Kenya's health care system is pluralistic, with services provided by both public and private health facilities in almost equal measure. The public service delivery system is organized into four tiers: 1) community (comprising community units), 2) primary care (comprising dispensaries and health centers), 3) county referral (comprising first and second referral hospitals), and 4) national referral (comprising tertiary care hospitals).⁸ The health system is financed by revenues collected by the government (national and county) through taxes and donor funding, NHIF and private health insurance companies (through member contributions), and out-of-pocket payments paid by citizens at the point of care.⁹

The purchasers of health services are:

- National and county governments, which provide supply-side subsidies to public facilities. For instance, county departments of health provide budgets to county hospitals to finance service delivery within the county.
- NHIF, which contracts with public and private health facilities and pays them for services provided to its enrollees.
- Private health insurance companies, which contract with private health facilities and pay them for services provided to their enrollees.¹⁰

NHIF has implemented several reforms. In 2013, it engaged PharmAccess Foundation to develop the NHIF Kenya Healthcare Quality Improvement Program (NHIF SafeCare program) and build the capacity of NHIF to assess service quality at health facilities.¹¹ In 2015, NHIF expanded its benefit package to cover outpatient services for members of the national scheme and specialized services (including renal dialysis, radiology, oncology, surgery, rehabilitation services, and overseas treatment) in all its schemes.^{6,12} Alongside the expansion of its benefit package, NHIF introduced capitation as the provider

payment method for outpatient services and fee-for-service and case-based payment for specialized services.⁶ In 2016, NHIF increased the inpatient payment rate from \$6 to \$24 USD per day to \$15 to \$40 USD per day for the lowest and highest-level facilities, respectively.⁶

A number of other programs and reform efforts implemented since 2006 have aimed to strengthen health purchasing in Kenya outside of NHIF:

- **Reproductive health voucher program.** This program, supported by the German Development Bank and implemented from 2006 to 2016, introduced an output-based voucher program to subsidize the cost of reproductive health services for poor people in five counties.¹³ Poor women were identified using a poverty grading tool. The program provided three types of vouchers: 1) safe motherhood vouchers, covering antenatal care, delivery (including cesarean sections), pregnancy and childbirth complications, and postnatal care up to six weeks, 2) family planning vouchers, covering implants, intrauterine contraceptive devices, and surgical contraception (vasectomy and tubal ligation), and 3) vouchers for gender-based violence recovery services, covering medical treatment and counseling.¹³ NHIF accredited and conducted quality assurance for the selected service providers under the voucher program, while the voucher management agency (a financial auditing firm) set payment rate ceilings and paid providers for redeemed vouchers based on the established rates.¹³
- **Health Sector Services Fund (HSSF).** In 2010, the government of Kenya introduced a fund to support the operations and maintenance of public primary health care (PHC) facilities (health centers and dispensaries) by providing supply-side budget support paid directly to the health facility's bank account.^{14,15} This direct facility financing reform aimed to compensate PHC facilities for revenue lost due to the implementation of a user fee removal policy. It was intended to increase PHC facilities' access to resources and enhance accountability for the resources, among other objectives.^{14,15} The fund was discontinued in the financial year 2015/16, and the national government and donors transitioned the compensation for discontinued user fees to conditional grants channeled through county governments.¹⁴
- **Single-county revenue funds.** The Public Finance Management Act of 2012 established single-county revenue funds for all county revenues, controlled

by the county treasury.¹⁶ Before this reform, public health facilities operated their own bank accounts and received transfers from the national government, NHIF payments, and user fee revenue directly to their bank accounts.^{7,14,17,18} Under the new arrangement and following the devolution of health services to the counties in 2013, public health facilities were required to remit their revenues to the county revenue fund.^{7,14,17,18} Following the reform, however, some counties passed laws allowing public health facilities to retain and spend the revenues they generated.^{14,17}

- **Free maternity care policy (Linda Mama).** In 2013, the Ministry of Health (MOH) introduced a free maternity care policy, which entailed free deliveries (including cesarean sections) in all public health facilities.¹⁸ In 2016, management of the program was transferred from the MOH to NHIF,¹⁹ and the policy was rebranded as the Linda Mama program.^{14,17,19} In 2018, the benefit package was expanded to include antenatal and postnatal care.²⁰ The benefit package currently includes antenatal care, delivery, postnatal care, outpatient and inpatient management of conditions and complications during pregnancy, emergency referrals, and outpatient and inpatient management of infants.²⁰
- **Kenya Patient Safety Impact Evaluation (KePSIE).** KePSIE was a randomized controlled trial conducted between 2013 and 2018 that evaluated the effects of government regulation and inspections on patient safety at public and private health facilities in three counties. Three randomized groups each received one type of inspection: 1) high-intensity inspection combined with enforcement of sanctions and warnings for non-compliance, 2) high-intensity inspection combined with enforcement of sanctions, warnings, and public disclosure of inspection results for non-compliant facilities, and 3) “business-as-usual” low-probability inspection (the control group), respectively.²¹

Methods

Study Design

We conducted a narrative review, which is most appropriate for our objectives of identifying and summarizing existing evidence in a specific area of interest and identifying areas requiring further investigation.²²

Search Strategy

To obtain relevant literature, we searched the MEDLINE, EconLit, Web of Science, and Google Scholar databases, using the following keywords related to three search concepts: 1) purchasing and related reforms (*purchasing, national hospital insurance fund, NHIF, free maternity, Linda Mama, health sector service fund, HSSF, performance-based financing, PBF, results-based financing, RBF, voucher*); 2) health system or UHC outcomes (*access, equity, quality, financial protection, financial risk protection, universal health coverage, UHC, health system goals, health system outcomes*); and 3) the study location: *Kenya*. We supplemented the database search with a bibliography search of the included papers and grey literature from websites of organizations that published information on health purchasing (such as ThinkWell, Resilient and Responsive Health Systems (RESYST), World Bank, and the World Health Organization). The databases were last searched in December 2021.

Eligibility Criteria

The inclusion criteria included articles assessing health purchasing reforms in Kenya, all study designs, studies published from the year 2000 (which is when substantial health financing reforms were introduced in Kenya), and articles published in English. The exclusion criteria included editorials and conference presentations.

Selection of Studies

EK screened the retrieved articles by title, abstract, and full text. Articles selected for inclusion in the review were discussed and agreed upon in consultation with JK and EB.

Conceptual Framework

Our review employed the Strategic Health Purchasing Progress Tracking Framework, which was developed by the Strategic Purchasing Africa Resource Center (SPARC) and a consortium of 11 technical partners. The framework describes health purchasing functions and how to track their progress. The framework postulates that a functional strategic purchasing system has four core purchasing functions: benefits specification, contracting arrangements, provider payment, and performance monitoring. These functions are organized and carried out through institutional arrangements and

are overseen by governance structures that assign roles and responsibilities and ensure accountability. Health purchasing also occurs within a context of various governance and external factors such as public financial management rules that may promote or hinder strategic purchasing. Purchasers also require capacity in strategic planning and policy development, health information systems, and communication. When these capacities are available and an enabling environment exists for purchasing functions to be implemented effectively, purchasers can influence resource allocation, accountability, and provider incentives. These, in turn, affect progress toward intermediate UHC objectives (equity in resource distribution, efficiency, transparency, and accountability) and long-term goals (utilization relative to need, financial protection and equity in finance, and service quality).^{23,24}

Data Extraction

We extracted data using Microsoft Excel. The data included general characteristics of the studies included in the review and summaries of the key findings.

Data Synthesis

Our data analysis entailed categorizing reforms identified in the literature by the purchasing functions identified in the Strategic Health Purchasing Progress

Tracking Framework. We then assessed evidence of the effects of these reforms on service delivery and the health system goals of equity, access, quality, and financial protection. We summarized the review findings using a narrative synthesis approach (an approach that enables the synthesis and comparison of evidence from different types of studies).²⁵

Search Results

We identified 645 articles from the literature search, of which 25 articles (15 peer-reviewed articles and 10 grey literature) were included in the review. Figure 1 illustrates the study selection process.

Study Characteristics

Of the included articles, 12 were qualitative, three were quantitative and seven used mixed methods. The qualitative studies used case study, cross-sectional, and process evaluation designs, while the quantitative studies used time series, cross-sectional, and randomized controlled trial designs. (See the Appendix for more details.)

Results

Health Purchasing Reforms in Kenya

The reforms identified in the included articles were related to three purchasing functions: benefits

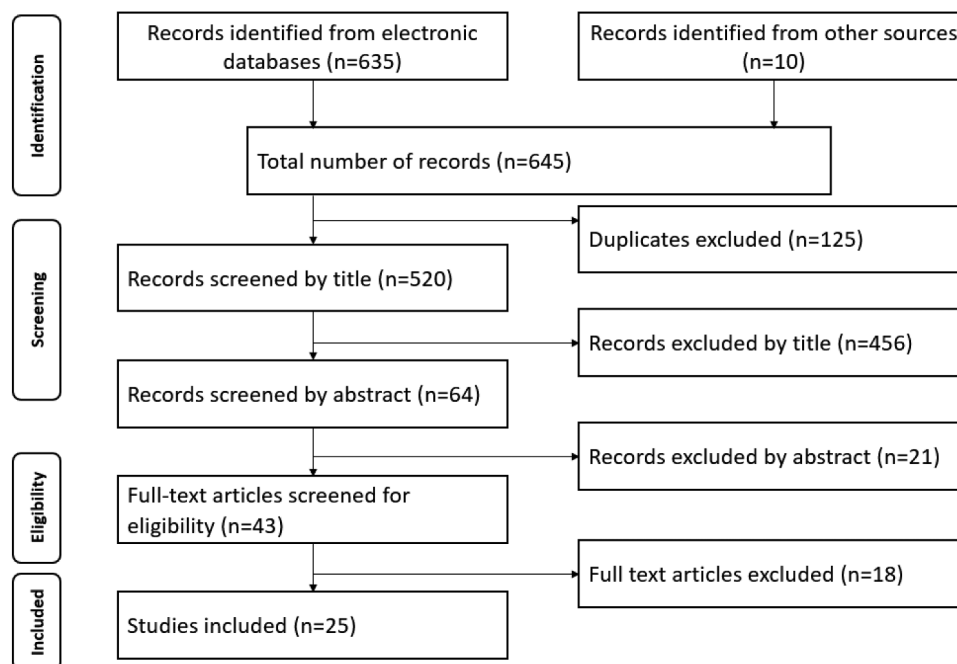


Figure 1. The study selection process. Adapted from the PRISMA 2009 flow diagram²⁶

Table 1. Health purchasing reforms in Kenya.

Purchasing function	Year	Reform
Benefits specification	2013	Introduction of free maternity care policy
	2015	Introduction of NHIF coverage of outpatient and specialized services
Provider payment	2006–2016	Introduction of a reproductive health voucher program
	2010	Implementation of the HSSF
	2013	Establishment of single-county revenue funds following devolution
	2015	Introduction of capitation payment for outpatient services and fee-for-service and case-based payment for specialized services
Performance monitoring	2016	Increase in NHIF payment rates for inpatient care
	2013–2018	Implementation of the NHIF SafeCare program
	2013	Implementation of KePSIE

Table 2. Effects of health purchasing reforms.

Health purchasing reforms	Desirable effects	Undesirable effects
Benefits specification reforms		
Free maternity care policy (Linda Mama)	Improved access to maternal health services as evidenced by increases in: <ul style="list-style-type: none"> • Antenatal and postnatal visits¹⁹ • Skilled birth deliveries²⁷ • Live births²⁷ • Normal deliveries¹⁹ • Cases of obstetric complications managed²⁷ 	Inadequate access due to: <ul style="list-style-type: none"> • Lack of clarity about the benefit package among providers^{18,28} • Under-provision of services^{18,28} Limited financial risk protection due to out-of-pocket payments ²⁰
Coverage of outpatient and specialized services in NHIF schemes	Enhanced responsiveness to population needs ⁶ Enhanced protection from financial hardship ¹²	Inadequate access due to: <ul style="list-style-type: none"> • Limited awareness of coverage among providers⁶ • Implicit benefit package⁶ • Inadequate geographic coverage of communications⁶ • Shortage of health workers⁶ • Shortage of drugs and equipment⁶ Inadequate financial risk protection due to out-of-pocket fees ²⁹ The expanded benefit package is a threat to NHIF's financial sustainability ⁷
Provider payment reforms		
Reproductive health voucher program	Improved service delivery through: <ul style="list-style-type: none"> • Better working conditions for health workers³⁰ • Purchase of more drugs, supplies and equipment^{30,31} • Hiring of additional staff^{30,31} 	Limited access due to: <ul style="list-style-type: none"> • Discrimination against voucher clients in favor of non-voucher or cash-paying clients^{13,31} • Declining of voucher clients by providers¹³ • Charging of extra fees for free services¹³ Limited quality assurance due to inadequate provider monitoring ¹³
HSSF	Improved service delivery through: <ul style="list-style-type: none"> • Purchase of drugs and medical supplies^{15,32} • Payment of operational and maintenance costs^{15,32} • Hiring of additional staff¹⁵ Improved quality of care through: <ul style="list-style-type: none"> • Reduced wait times¹⁵ • Improved facility cleanliness¹⁵ Improved access, as evidenced by increases in patient numbers ¹⁵	Effects on service delivery due to delays in disbursement of funds and authorization to incur expenditures ^{15,32}
Single-county revenue funds following devolution		Service delivery challenges due to lack of funds to purchase supplies ^{18,20}
Capitation payments for outpatient services and fee-for-service and case-based payments for specialized services	Lump-sum payments (for example, from capitation, which facilitated the financing of health facility budgets and service provision) ³³	Reduced access due to perceived inadequacy of payment rates, in the form of: <ul style="list-style-type: none"> • Under-provision of services⁶ • Over-referral of patients⁶ • Providers declining to contract with NHIF^{6,33,34} Limited financial risk protection due to: <ul style="list-style-type: none"> • Out-of-pocket charges for medication⁶ • Charging of copayments⁶
Increase in NHIF payment rates for inpatient care		Limited financial protection due to continued balance billing of patients ²⁹ Inpatient care accounts for the largest share of claims threatening NHIF's financial sustainability ⁷
Performance monitoring reforms		
NHIF SafeCare program	Enhanced quality assurance capacity of NHIF through: <ul style="list-style-type: none"> • Training of staff¹¹ • Automation of health facility assessments¹¹ Improved quality of care through the establishment and/or revival of continuous quality improvement initiatives at health facilities ¹¹	
KePSIE	Improved access, as evidenced by increased client numbers ¹¹ Improved quality of care, as evidenced by improvements in health facility inspection scores ²¹	

specification, provider payment, and performance monitoring, as detailed in Table 1.

Effects of Health Purchasing Reforms

Table 2 summarizes the effects of health purchasing reforms on access, equity, quality of care, and financial protection.

Effects of Benefits Specification Reforms

Free Maternity Care Policy

Interrupted time-series studies showed that the free maternity care policy led to an increase in antenatal and postnatal care visits,^{19,27} skilled birth deliveries, live births,²⁷ normal deliveries,¹⁹ and the number of pregnant women with obstetric complications who were attended to.²⁷

Access to free maternity services under the management of both the MOH and NHIF was limited by a lack of clarity about benefit package entitlements among providers, leading to under-provision of services at some facilities.^{18,28} This was associated with inadequate communication about the benefit package.¹⁸ Financial protection was also limited by out-of-pocket spending by patients to purchase drugs and medical supplies that were unavailable at contracted facilities.²⁰

Coverage of Outpatient and Specialized Services in NHIF Schemes

The expanded NHIF benefit packages were perceived to be responsive to population needs because they were informed by disease burden, feedback from NHIF beneficiaries, and patient support groups.⁶ However, they were criticized for overlooking PHC and focusing more on secondary and tertiary care.⁷

Expansion of the NHIF benefit package enhanced financial risk protection for NHIF members to some extent.¹² However, access to the new package was limited by insufficient awareness of entitlements among providers, lack of explicitness about service entitlements, and limited geographic coverage of communications.⁶ Shortages of health workers, drugs, and equipment prevented facilities from effectively delivering the new package,⁶ leading NHIF members to incur out-of-pocket payments at non-NHIF-contracted facilities.²⁹ The expanded package also threatened NHIF's financial sustainability. For example, NHIF premium contributions increased threefold from 2013/14 to 2017/18, while benefit payouts increased fivefold during the same period.⁷

Effects of Provider Payment Reforms

Reproductive Health Voucher Program

Most providers reported that the voucher program was profitable for them, provided a reliable source of revenue, and encouraged competition and improvement of services.³⁰ Private facilities used the funds to motivate staff by improving working conditions³⁰; to ensure that drugs, supplies, and equipment were available; to build additional wards; to hire more staff, and to improve client comfort.^{30,31} Some voucher users reported receiving better-quality care compared to when they were not using vouchers.³¹

However, the perceived inadequacy of the payment rates led some providers to discriminate against voucher clients in favor of non-voucher or cash-paying clients who paid higher user fees.^{13,31} Some providers declined to attend to voucher clients or charged them extra fees.¹³ Lack of financial autonomy over voucher revenue at public facilities limited the incentives of this output-based payment,³⁰ and NHIF's lack of regular monitoring of providers limited quality assurance of the services provided.¹³

Health Sector Services Fund

The HSSF, a direct facility funding mechanism, made resources available to improve service delivery by paying for medical supplies and essential drugs, wages for support staff, and operational and maintenance costs.^{15,32} This contributed to enhancing existing services and introducing new services (such as outreach by some facilities that now had transport and staff allowances).³² Patients across five counties reported improvements in overall service delivery, the number of staff, wait times, medicine availability, facility cleanliness, and other areas.¹⁵ Facility improvements and increased service availability contributed to an increase in staff motivation and the number of patients seeking care.^{15,32} However, HSSF funds were reported to be inadequate to meet facility needs, and there were also delays in receiving funds and authorization to incur expenditures.^{15,32}

Establishment of Single-County Revenue Funds

The establishment of single-county revenue funds reduced financial autonomy at the facility level, leading to adverse incentives. The reform limited the ability of public facilities to make purchasing decisions, demotivated staff,¹⁰ incentivized illegal spending of user fees, and discouraged some providers from attending to NHIF members.¹⁴ Lack of access to NHIF reimbursements negatively affected the delivery of free maternity services. It also limited the funds needed to procure essential supplies and hire staff to manage free maternity

claims, and facilities were thus less likely to submit and follow up on claims.^{20,28} These negative consequences were compounded by delayed and unpredictable disbursement of funds from county treasuries to county departments of health.¹⁰

Capitation, Fee-for-service, and Case-based Payment by NHIF

Providers considered these new payment mechanisms, and especially capitation, to be an important source of revenue because the funds were guaranteed and were paid as a lump sum each quarter, thus helping to stabilize health facility budgets and facilitate service provision.³³ However, both public and private providers felt that the capitation rate was inadequate to cover the actual costs of care.^{6,33-35} This led some public providers to underprovide services, over-refer patients, ask patients to pay for medications out of pocket (especially for chronic illnesses), and charge copayments—all of which limited financial protection.⁶ Private providers were also hesitant to contract with NHIF because of capitation payment, and this contributed to limiting access to outpatient services for NHIF members.^{6,33,34}

Capitation disbursements for outpatient care and fee-for-service and case-based payments for specialized services were reported to be delayed and unpredictable.^{6,17,29,35} Furthermore, providers complained of inadequate opportunity to be involved in decision making (including determining NHIF payment rates), poor communication about changes in payment rates or new policies, and lack of clear channels for providers to raise concerns.³⁵

Increased NHIF Payment Rates for Inpatient Services

NHIF increased payment rates for providing inpatient services as a way to reduce out-of-pocket payments by NHIF members.¹² However, provider perceptions that the per-day payment was inadequate led them to charge NHIF members additional fees (a practice known as “balance billing”).²⁹ The revised payment rates threatened NHIF’s financial sustainability because inpatient claims accounted for the largest share of claims (48%), at an average of 22,000 KES (\$217 USD) per claim.⁷

Effects of Performance Monitoring Reforms

NHIF SafeCare Program

The SafeCare program enhanced NHIF’s capacity to objectively assess health facility performance, including through PharmAccess Foundation training of NHIF staff including benefits and quality assurance officers.¹¹ It also enhanced NHIF’s capacity to automate health facility assessments and use information management

systems.¹¹ Enrollment of health facilities in the SafeCare program led to the establishment and/or revival of continuous quality improvement initiatives, which led to improvements in service quality as well as documentation and record keeping.¹¹ An assessment of the SafeCare program at five facilities found an increase in monthly client numbers, which may have been spurred by the improved quality of care.¹¹

KePSIE Study

The KePSIE study found a 15% increase in Joint Health Inspection Checklist (JHIC) scores in facilities in the treatment group compared to the control group, with private facilities recording more than twice the increase (18%) reported in public facilities (8%).²¹ Health facilities perceived the JHIC to be objective and fair, and most of them reported that the inspection process was more supportive and structured to improve compliance than the previous facility inspection system.^{36,37}

Widespread licensing challenges were reported in the private sector, including expired licenses or unlicensed facilities and inadequate adherence to sanctions (such as operating despite a facility closure after inspection).^{21,38} Health facilities raised concerns about licensing costs, delays in issuing licenses, and the need for multiple licenses.³⁶ Following inspections, public health facilities were hampered from implementing proposed improvements by a lack of financial autonomy.^{36,37} While private facilities reported that costs and using rental premises were the key barriers to facility improvement.³⁶ Regarding social accountability, the display of facility performance scorecards encouraged facilities to improve their performance. However, poor understanding of the scorecards among members of the public limited the effectiveness of bottom-up accountability.³⁶

Discussion

This study reviewed the effects of health purchasing reforms implemented in Kenya on access, equity, quality of care, and financial protection. The reforms were related to three purchasing functions: benefits specification, provider payment, and provider monitoring.

In terms of benefits specification reforms, we found that specifying high-priority services for vulnerable groups (such as the introduction of free maternity services covered by the government) and expansion of service entitlements under insurance coverage increased service utilization and reduced exposure to out-of-pocket payments.¹² However, access to new benefits was limited by poor communication to providers and lack of adequate resources to ensure service

availability.^{6,20,29} Lack of clarity about service entitlements among both providers and beneficiaries could be mitigated by ensuring that benefit packages are explicitly defined, with lists of included and/or excluded services.³⁹ Timely communication of changes to benefit packages to both providers and beneficiaries would ensure that providers provide all covered services and beneficiaries get the full set of services they are entitled to. This could limit the under-provision of care and facilitate standardization of care across providers while limiting unnecessary copayments.³⁹

Regarding provider payment reforms, making funds available at the provider level enhanced service delivery and incentivized improvements in the quality of care.^{30,31} However, perceived inadequacy in provider payment levels induced negative provider behavior, which had negative effects on health system goals such as access and protection from financial hardship.^{6,10,13,31} Undesirable provider behavior could be mitigated by ensuring that payments are predictable and payment rates are high enough to cover the costs of good-quality care delivered efficiently. This should be accompanied by monitoring of providers and strengthening of accountability measures, such as patient feedback mechanisms.⁴⁰

In terms of performance monitoring, reforms that enhance the quality assurance capacity of purchasers and regulatory bodies and promote a culture of continuous quality improvement at health facilities have the potential to increase access to quality services.¹¹ However, public financial management rules have hindered the implementation of quality improvement initiatives due to a lack of facility financial autonomy over generated revenue.^{11,36} This finding is consistent with evidence showing that in many countries, providers lack or have insufficient autonomy to act on incentives to provide better-quality care.⁴¹ Some level of facility autonomy is essential to make purchasing reforms effective. Increased hospital autonomy has been linked to improvements in quality of care, efficiency, equitable distribution of resources, and accountability.⁴²

Limitations of the Study

This review had some limitations. Most studies included in the review were qualitative and thus assessed participants' views about the various reforms. There is a dearth of research that evaluates the quantitative impact of purchasing reforms. There was also limited evidence on some reforms, such as reforms related to performance monitoring. More robust evidence is needed to support firmer conclusions about the effects of the reforms examined in this study. Future research could assess the effects of ongoing reforms at NHIF related to

governance arrangements, financial management, and performance monitoring.

Policy Considerations

A wide range of health purchasing reforms and interventions have been undertaken in Kenya, with many promising results. However, these measures have been disjointed, in some cases under-resourced, not well communicated, and limited by the lack of autonomy for public providers to respond to new incentives in purchasing arrangements. Based on the findings of our review, policymakers could consider prioritizing the following measures to address some of the gaps in health purchasing reforms and make course corrections as needed to achieve desired health system outcomes and UHC objectives.

- Better communication of covered health benefits to ensure equitable access to information among health providers and all population groups
- Changes to public financial management at the county level to give facilities some financial autonomy over the revenues they generate
- Timely and adequate disbursement of payments from purchasers to providers
- Enhanced purchaser capacity to monitor the response of providers to purchasing policies

Conclusions

Progress toward desired health system outcomes in Kenya has entailed implementing several purchasing reforms and interventions that have to some extent contributed to improved access, quality of care, and financial risk protection. However, these reforms have not been harmonized, some have not been implemented on a large scale, and their design and implementation have in some cases generated adverse provider behavior that has had negative effects on desired health system outcomes. A more holistic approach to strategic purchasing, especially by NHIF, could generate better results and accelerate progress toward attaining UHC in Kenya.

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Author Contributions

EK: conceptualization, methodology, analysis, original draft preparation, review, and editing; JK: methodology, review, and editing; EB: conceptualization, methodology, and review and editing.

Data Availability Statement

The authors confirm that the data supporting the findings of this study are available within the article and/or its supplementary materials.

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Appendix: Studies and Reports Included in the Review

Author and year	Study/report objective(s)	Study type	Study design	Study area
Abuya et al. 2012 ¹³	To review the implementation experiences of the reproductive health program in Kenya	Qualitative	-	Four counties
Barasa et al. 2017 ²⁹	To examine the experiences and perceptions of informal-sector workers with regard to NHIF membership	Qualitative	Cross-sectional	Two counties
Barasa et al. 2018 ¹²	To analyze the implications of NHIF reforms for Kenya's quest to achieve UHC	Review	-	-
Bedoya et al. 2019 ²¹	To assess the impact of regulations and inspections in health facilities	Quantitative	Randomized controlled trial	Three counties
Bedoya et al. 2019 ³⁸	To assess the implementation, mechanisms of impact, contextual factors, governance and institutional arrangements, critical resources and efficiency determinants, and sustainability and risk factors for replicability and scalability of the health inspections system	Mixed methods	Quantitative (facility survey) and qualitative methods	Three counties
Health Financing Reforms Expert Panel 2019 ⁷	To review NHIF performance and recommend reforms to reposition it as a strategic purchaser of health services	Mixed methods	Quantitative and qualitative	-
International Finance Corporation 2011 ¹¹	To assess the appropriateness of the SafeCare program in addressing NHIF quality management gaps, progress toward meeting the program's goals, the effectiveness of implementing the program within NHIF and enrolled health care facilities, and the long-term sustainability of the program	Mixed methods	Quantitative (a quasi-experimental before-and-after design) and qualitative	Two regions
Langat et al. 2019 ²⁷	To measure the effects of the free maternity care policy on utilization, access, and quality of care, including any adverse effects	Quantitative	Interrupted time series study	Three counties
Mbau et al. 2018 ¹⁰	To examine the extent to which the purchasing actions of the county departments of health are strategic within its relationships with the government, providers, and citizens	Qualitative	Case study	10 counties
Mbau et al. 2020 ⁶	To examine the effects of purchasing reforms on NHIF's purchasing practices and the implications for strategic purchasing and the health system goals of equity, efficiency, and quality	Qualitative	Embedded case study	Two counties
Mbuthia et al. 2019 ¹⁴	To understand purchasing policies and practices at the county level	Qualitative	Desk review and interviews	Three counties
Munge et al. 2018 ³⁴	To critically analyze the purchasing arrangements of NHIF as a case study	Qualitative	Case study	Two counties
Njuki et al. 2013 ³¹	To examine community experiences with and perceptions of the reproductive health voucher program in Kenya	Mixed methods	Quantitative (household survey) and qualitative	Three counties
Njuki et al. 2015 ³⁰	To assess how well health care providers and facility managers understand the reproductive health voucher program, their attitudes toward the program, and their observations about the program's benefits and challenges	Qualitative	-	Four counties
Obadha et al. 2019 ³³	To explore the experiences of private, faith-based, and public health care providers with capitation and fee-for-service payment mechanisms in Kenya	Qualitative	Cross-sectional	Two counties
Orangi et al. 2021 ²⁰	To examine the emergence, implementation fidelity, and experience of the Linda Mama program in Kenya	Mixed methods	Cross-sectional study using qualitative and quantitative approaches	Five counties
Orangi et al. 2021 ¹⁹	To estimate the effects of the freematernity policy and Linda Mama program on facility deliveries and attendance of antenatal and postnatal care visits	Quantitative	Retrospective interrupted time series	Five counties
Sieverding et al. 2018 ³⁵	To examine the experiences of private providers in two social health insurance schemes: NHIF in Kenya and the National Health Insurance Scheme in Ghana	Qualitative	-	Three regions
Tama et al. 2018 ¹⁸	To examine the extent to which the free maternity policy was implemented according to design, and to examine positive experiences and challenges encountered during implementation	Mixed methods	A qualitative study, document review, and review of clinical records	Three counties
Tama et al. 2019 ³⁶	To understand how KePSIE reforms played out in practice, including what worked and what didn't	Qualitative	Process evaluation	Three counties

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Author and year	Study/report objective(s)	Study type	Study design	Study area
Tama et al. 2021 ³⁷	To assess the use of the Joint Health Inspection Checklist in order to identify key facilitating or hindering factors, reflect on the extent to which these were captured in the original theory of change, and to draw lessons for regulatory policy and practice	Qualitative	-	Three counties
ThinkWell Strategic Purchasing for Primary Health Care 2020 ²⁸	To review the Kenyan context in terms of strategic purchasing for PHC, family planning, and maternal, newborn, and child health, to explain strategic purchasing for PHC strategies and showcase key results and findings	Review	-	-
Vilcu et al. 2020 ¹⁷	To describe data to inform decisions about payments to health care providers	Qualitative	-	Three counties
Waweru et al. 2013 ³²	To describe and review evidence on HSSF implementation, including facilities covered, funds disbursed, and activities undertaken	Review	-	-
Waweru et al. 2016 ¹⁵	To describe the early implementation of HSSF, an innovative national health financing intervention in Kenya	Mixed methods	Process evaluation	Five districts