Changing the game in purchasing health services: findings from a provider-purchaser engagement in Kenya

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Abstract

Background: Kenya has committed to achieving universal health coverage (UHC) by 2030 and has prioritized purchasing reforms. Enhancing effective provider-purchaser engagements is quintessential to transitioning to strategic purchasing reforms on provider selection or empanelment, benefits package design and provider payments mechanism. This study assessed the challenges hindering effective provider-purchaser engagement in Kenya and proposed actionable solutions to policymakers and actors.

Methods: The study applied a cross-sectional qualitative study design. Data was collected using interviews – incorporating both focus group discussions (FGDs), in-depth interviews (IDIs) and a consensus-building workshop with stakeholders representing healthcare providers, medical professional bodies, the National Hospital Insurance Fund (NHIF – at county/branch and national level), health insurance beneficiaries, the Council of Governors (COG) and the ministry of health (MOH). Purposive sampling was employed to select stakeholder representatives for each of the stakeholder clusters.

Results: Provider-purchaser challenges were identified to result from 1) human resource gaps (understaffing and staff turnover), 2) infrastructure gaps (both hardware and software), 3) knowledge and skill gaps, and 4) governance issues attributed to bureaucratic processes, poor accountability mechanisms and poor mechanisms of communication between providers and purchasers.

Providers and purchasers emphasized the need for 1) automation of processes, 2) review of provider payment mechanisms (PPMs), 3) regular capacity building of providers, 4) effective communication and accountability and 5) development of public-private contracting frameworks as key actionable solutions for implementation.

Conclusion: Challenges hindering effective provider-purchaser engagements result largely from human resources, infrastructure, capacity, communication and accountability gaps. Reforms aimed at addressing these gaps must focus on building staff capacity in the payment process, employment or prioritization of staff to the payment process, adoption of information systems or technology to automate processes (both on empanelment and payment) and establishment of working communication channels (both automated and in-person processes) that are regular. Such reforms should be tailored to the stakeholders’ actions and monitored to ensure adequate implementation to enhance provider-purchaser engagements.

Background

The incorporation of Universal Health Coverage (UHC) as a key target under goal 3 on good health and wellbeing has cemented its prioritization in the global health space (1). Achieving UHC means the whole country’s population has access to good quality preventive, promotive, curative, and rehabilitative services for their health needs without making them suffer any financial hardship (2, 3). Kenya has committed to achieve UHC by 2030 (4). Moving towards this goal requires health system-wide reforms; however, increasing evidence has cemented the role of purchasing reforms as a lever toward achieving UHC (5, 6).

Purchasing refers to the allocation of pooled funds to health providers for the delivery of health services on behalf of certain groups or entire populations (5). It involves three main decisions: deciding 1) what to buy (specific services and interventions), 2) from whom to buy (selection of providers), and 3) how to buy (related
to the provider payment mechanism and contractual arrangements) (2, 5). Purchasing is considered strategic when these allocations are continuously linked, at least in part, to information on provider performance and the health needs of the population they serve (2). Strategic purchasing, therefore, involves the deliberate use of information to efficiently perform the three purchasing actions (5).

Particularly, reforms to strategic purchasing actions targeting the improvement in provider-purchaser engagements are paramount, given the roles that providers and purchasers play in ensuring the population receives all needed healthcare services and is protected from financial hardship (2, 7, 8).

To transition to strategic purchasing, there is a need to strengthen provider-purchaser engagements through reforms on benefits package design/specification, provider selection/empanelment, and provider payments mechanism/reimbursements (6). Making healthcare purchasing more strategic requires the generation and use of evidence about provider behaviour, challenges that may hinder effective engagements and context-specific actionable solutions targeting the real root-causes of provider-purchaser-engagement challenges. Effective provider-purchaser engagement can help in joint problem diagnostics and hence the development of actions to address health financing and service delivery bottlenecks both from the purchasers or the providers perspective.

However, there is a dearth of studies that have examined the challenges affecting effective provider-purchaser engagements in Kenya. One study indicated that provider-purchaser engagements are characterized by 1) provider selection/empanelment challenges (such as inequalities in empanelment), 2) provider-payment challenges (such as delays in reimbursement, fraud, poor enforcement/honouring of contracts, and inequalities in payment rates) and 3) communication challenges (poor communication and low trust) (9).

However, although the study elicited the above challenges, the study did not include the public sector providers, public purchasers of health in Kenya, and other key stakeholders in the health sector such as regulators, who also have a significant contribution to the delivery of health services in the country. Against this backdrop, this study aimed at taking a deep dive into highlighting the root causes of the challenges and generating actionable solutions for providers, purchasers, policymakers, and other actors in the health sector.

**Methods**

**Study setting**

Kenya is a lower-middle income country (10) with a human development index (HDI) of 0.601 in the 2022 HDI rankings (11). The health system is financed by revenues collected by (1) The government (national and county) through taxes and donor funding, (2) The National Health Insurance Fund (NHIF) through member contributions and sponsored schemes, (3) Private health insurance companies through member contributions, and (4) out-of-pocket (OOP) spending by citizens/households at the points of care. Table 1 outlines the key health financing indicators in the country between 2002 and 2019.
Table 1
Selected health financing indicators for Kenya (2002 to 2019).

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health insurance coverage</td>
<td>9.7%</td>
<td>NA</td>
<td>10.0%</td>
<td>17.1%</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Percentage of THE financed by public sources</td>
<td>29.6%</td>
<td>29.3%</td>
<td>28.8%</td>
<td>33.5%</td>
<td>37%</td>
<td>46.0%</td>
<td>44.5%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Percentage of THE financed by donors</td>
<td>16.4%</td>
<td>31.0%</td>
<td>34.5%</td>
<td>24.7%</td>
<td>23.4%</td>
<td>21.2%</td>
<td>22.3%</td>
<td>19.1%</td>
</tr>
<tr>
<td>Percentage of THE financed by private sources</td>
<td>54.0%</td>
<td>39.3%</td>
<td>36.7%</td>
<td>40.6%</td>
<td>39.6%</td>
<td>7.5%</td>
<td>8.1%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Percentage of THE financed by out-of-pocket payments</td>
<td>N/A</td>
<td>N/A</td>
<td>25.1%</td>
<td>26.6%</td>
<td>26.1%</td>
<td>25.3%</td>
<td>25.2%</td>
<td>26.6%</td>
</tr>
<tr>
<td>THE per capita (US$)</td>
<td>60.61</td>
<td>70.45</td>
<td>81.09</td>
<td>94.58</td>
<td>92.96</td>
<td>97.40</td>
<td>99.90</td>
<td>105.81</td>
</tr>
<tr>
<td>Government expenditure as a percentage of total government expenditure</td>
<td>7.9%</td>
<td>5.1%</td>
<td>4.8%</td>
<td>6.1%</td>
<td>6.7%</td>
<td>10.3%</td>
<td>10.7%</td>
<td>11.7%</td>
</tr>
<tr>
<td>THE as a percentage of GDP</td>
<td>5.1%</td>
<td>4.7%</td>
<td>5.4%</td>
<td>6.8%</td>
<td>5.2%</td>
<td>5.5%</td>
<td>5.3%</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Source: 2013/14, 2015/16, and 2018/19 Kenya Health Accounts (12)

Study Design And Sampling

Overall, the study adopted a qualitative cross-sectional study design. Primarily, data were collected using interviews – incorporating both focus group discussions (FGDs) and in-depth interviews (IDIs) with representatives of providers (public, private – for-profit and faith-based and social health franchises), purchasers, government regulatory, oversight agencies, health insurance beneficiaries and medical professional bodies - and through a 3-day workshop with other representatives from the highlighted stakeholders in Table 2.
The workshop was conducted in October 2021 to validate the findings from the interviews, build consensus among stakeholders and develop actionable solutions for tackling provider-purchaser challenges in Kenya.

Purposive sampling was employed to select stakeholder representative groups for each of the stakeholder clusters highlighted in Table 2. Each stakeholder representative then recommended at least two representatives for the FGDs and at least one representative for the workshop.
## Table 2
Stakeholders engaged and the number of FGDs/IDIs

<table>
<thead>
<tr>
<th>Stakeholder Cluster</th>
<th>Stakeholder representative</th>
<th>Number of FGDs/IDIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Healthcare Service Providers/FBOs</td>
<td>Rural Private Hospitals Association of Kenya (RUPHA)</td>
<td>2 FGDs</td>
</tr>
<tr>
<td></td>
<td>Christian Health Association of Kenya (CHAK)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supreme Council of Kenya Muslims (SUPKEM)</td>
<td></td>
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<tr>
<td></td>
<td>Kenya Conference of Catholic Bishops (KCCB)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kenya Association of Hospitals</td>
<td></td>
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<tr>
<td></td>
<td>Hindu Council of Kenya (HCK)</td>
<td></td>
</tr>
<tr>
<td>Social Health Franchises</td>
<td>Tunza by PS Kenya</td>
<td>2 FGDs</td>
</tr>
<tr>
<td></td>
<td>Amua by Marie Stopes International</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CFW by Sustainable Healthcare Federation</td>
<td></td>
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<tr>
<td></td>
<td>Huduma Poa Network by Kisumu Medical and Education Trust</td>
<td></td>
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<tr>
<td></td>
<td>Association of Health Franchising in Kenya</td>
<td></td>
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<tr>
<td></td>
<td>Goldstar Network</td>
<td></td>
</tr>
<tr>
<td>Medical Professional Bodies</td>
<td>Kenya Association of Private Hospitals (KAPH)</td>
<td>2 FGDs</td>
</tr>
<tr>
<td></td>
<td>Pharmaceutical Society of Kenya (PSK)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kenya Medical Association (KMA)</td>
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<tr>
<td></td>
<td>National Nurses Association of Kenya (NaNAK)</td>
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<tr>
<td></td>
<td>Kenya Clinical Officers Association (KCOA)</td>
<td></td>
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<tr>
<td></td>
<td>Kenya Dental Association (KDA)</td>
<td></td>
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<tr>
<td>Public Healthcare Service Providers</td>
<td>National Teaching and Referral Hospitals</td>
<td>2 FGDs</td>
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<tr>
<td></td>
<td>Select County CHMTs</td>
<td></td>
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<tr>
<td></td>
<td>Ministry of Health – Primary Healthcare Department</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Council of Governors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>County Health Facilities</td>
<td></td>
</tr>
<tr>
<td>Purchasers</td>
<td>National Hospital Insurance Fund (NHIF)</td>
<td>4 IDI</td>
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<tr>
<td></td>
<td>Select County CHMTs</td>
<td>2 FGDs</td>
</tr>
<tr>
<td>Stakeholder Cluster</td>
<td>Stakeholder representative</td>
<td>Number of FGDs/IDIs</td>
</tr>
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<td>---------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Ministry of Health – Tax-funded strategic programs</td>
<td></td>
<td>2 FGDs</td>
</tr>
<tr>
<td>Community-Based Health Insurance Schemes (CBHIS)</td>
<td></td>
<td>2 FGDs</td>
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<tr>
<td>• M-Tiba</td>
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<tr>
<td>Private Insurers (HMOs):</td>
<td></td>
<td>2 FGDs</td>
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<tr>
<td>• Association of Kenya Insurers (AKI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medical Insurance Practitioners of Kenya (MIPAK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Regulatory, Oversight and Policy Agencies</td>
<td>Insurance Regulatory Authority (IRA)</td>
<td>2 IDIs</td>
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<tr>
<td></td>
<td>Kenya Health Professionals Oversight Authority (KHPOA)</td>
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<td>Health Insurance Beneficiaries</td>
<td>Women Living with HIV &amp; AIDS in Kenya (WOFAK)</td>
<td>2 FGDs</td>
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<tr>
<td></td>
<td>Kenya Network of Cancer Organizations (KENCO)</td>
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<td></td>
<td>Faraja Cancer Support</td>
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<td></td>
<td>NCD Alliance Kenya</td>
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<td></td>
<td>Diabetes Management Institute Kenya</td>
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<td></td>
<td>Sickle Cell Anemia Foundation- Kenya (SCAFKENYA)</td>
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<td></td>
<td>Cerebral Palsy Society of Kenya</td>
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<tr>
<td>Ministry Of Health (MoH)</td>
<td>Division of Planning and Health Financing</td>
<td>3 IDIs</td>
</tr>
<tr>
<td></td>
<td>Accreditation Department</td>
<td></td>
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<td></td>
<td>Department of Standards and Quality Assurance and Regulations</td>
<td></td>
</tr>
<tr>
<td>Council of Governors</td>
<td>Health Experts</td>
<td>1 FGD</td>
</tr>
</tbody>
</table>

**Data Collection**

The interviewees were invited to take part in the FGDs or IDIs. All FGDs were conducted virtually using Zoom meetings, whereas IDIs were conducted using a mix of both Zoom and face-to-face interviews. The interviewees provided consent before the beginning of the FGDs/IDIs. The interviews were audio-recorded and transcribed verbatim. Also, data was collected through a stakeholder workshop that targeted representatives from the public and private providers and purchasers, as well as other stakeholders in the health financing space.
Data Management And Analysis

Transcripts from the IDIs and FGDs were charted using MS Excel using a coding framework focussing on the root causes and actionable solutions to challenges hindering effective provider-purchaser engagements. The data were analysed using a thematic approach (13). Emerging themes were discussed with all co-authors when presenting the initial findings, and a consensus was reached on the final themes.

Results generated from the consensus-building workshop were summarised in Microsoft Word, and actionable solutions were identified.

Results

Root causes to challenges hindering effective provider-purchaser engagements

1. Resource gaps

Resource gaps was one of the root causes of a majority of the challenges that hindered effective provider-purchaser engagements. These resource gaps were manifested in two ways:

a) Human resource gaps: This was a common factor across both providers and purchasers; specifically, gaps in human resources affected the payment process (i.e. for providers - raising and lodging of claims and for purchasers - reviewing, adjudicating and disbursements of reimbursements to providers). Amongst providers, staff gaps resulted in existing staff taking multiple roles and tasks, which led to the heavy workload that contributed to, among other things, delays and errors in lodging claims. This affected the quality of claims raised, leading to delays in decisions on claims, part payments or even rejections. In the public sector facilities, human resource gaps largely prevented them from lodging and following up on claims resulting to loss of income.

"I think for facilities delaying in claiming is that because some of the facilities actually lack resources.... Some lack critical staffs. Some multitask – in fact for our facility, the person claiming [is the same] person registering patients." FGD 1 – Public providers

".... like in my facility, the person who does the claims actually has other tasks that he has to do during the day. So inadequate human resource is quite burdening for us.... So, this person doesn't have time to actually do the claims and then go over them before submitting them to see if there are any errors to those claims." FGD 1 – Public providers

Additionally, human resource gaps were attributed to staff turnover limiting the knowledge of terms and conditions between providers and purchasers, and ultimately the provider-purchaser relationships.

"I think one of the challenges we face with hospitals is...the staff turnover, you were communicating to this person, this person left, they never communicated that the person left so you keep sending communication to that person and the person is no longer in office." FGD 2 – Private Health Insurance

Besides, providers also expressed that purchasers experience staff shortages leading to exacerbated delays in reimbursement of claims. Inadequate staff contributes to the piling up of unverified, unpaid claims (workload),
and delays in resolving emerging issues.

"And when you look at them, I think also they are understaffed. That's one of the reasons that we've realized it could be that they are understaffed so that you at times even fighting for a claim that had stayed with them for a year." FGD 1 – Private healthcare providers.

**b) Infrastructure gaps:** Poor infrastructure among healthcare providers was also an important resource gap attributed to existing challenges expressed by healthcare providers. Infrastructure gaps relate to both hardware and software issues. For instance, providers highlighted the lack of required equipment such as printers and photocopiers to facilitate the lodging of claims.

"I think the facilities actually lack some critical resources to make the claim in real-time... some of them lack even equipment to process the claims even photocopying papers." FGD 1 – Public providers

Other infrastructure gaps among providers included the lack of infrastructure for specific departments such as pharmacy and a laboratory which are crucial for the empanelment of providers. This affected the participation of smaller facilities in pre-paid schemes by the purchasers.

"So the NHIF has a checklist, and this checklist was favouring bigger facilities because in this checklist you had a component like a pharmacy, lab and so on. So, you find a facility that is small, maybe doesn't have a pharmacy department would still be assessed on pharmacy [before empanelment]." FGD 2 - Social Health Franchises

Besides, healthcare providers and purchasers highlighted technology gaps that result in most of the challenges experienced by both providers and purchasers. First, providers highlighted the lack of access to a reliable internet network, the lack of automation of claims (lots of paperwork increasing the workload) which contributed to delays in reimbursement, errors in submission of claims, loss of claims or supporting documents and fraud.

"The process of claiming is largely manual. The process is still cumbersome in terms of processing claims, they require that you do manual claim, you attach the supporting documentation. So it's a bit tedious actually to make claims in the current process." FGD 2 – Public health providers

Whereas, purchasers, particularly the NHIF, highlighted internet network gaps with existing technology that caused delays in processing claims, notification of admissions, and other activities requiring providers to reach the NHIF, especially during system downtimes.

"We as NHIF, we use systems, and these systems require network. Sometimes we have issues with networks whereby the facilities are unable to do some things on our clients and it becomes a problem to us because sometimes they reach us as branch but sometimes when it is issue of network there is nothing we can do." IDI 3 - NHIF quality assurance branch manager.

There is an effort towards automation by different purchasers (NHIF and private health insurers) and there are vast opportunities to be enjoyed when this process is fully implemented. NHIF is currently implementing the electronic claims (e-claims) across the county to both public and private health providers.
2. Training/Capacity gaps

Training or capacity gaps refer to healthcare providers’ unmet knowledge and skill gaps from high staff turnover and the lack of regular training (especially when purchasers change benefit packages). The high staff turnover resulted in the loss of key staff with the requisite knowledge (on terms and conditions, benefits packages), skills and established relations with purchasers. These contributed to delays in lodging claims, errors in documentation for the submitted claims and/or high workload. There are very few opportunities to update provider staff on reviewed terms and conditions of the schemes.

"...delays are occasioned by issues of capacity – capacity in the sense of manpower, in other words, people who are well versed with the tech-know how to handle claims." FGD 1 – Private healthcare providers

In terms of regular training, healthcare providers needed refresher trainings for their staff handling claims, especially when purchasers changed benefits packages or full training for new staff employed by providers to handle claims. For instance, the lack of or inadequate training resulted in errors while lodging claims that, in turn, delayed claims for reimbursement or caused outright rejection of claims.

"...I think one of the things that I see as a gap is also on the documentation part which sometimes is poor from the provider's perspective which leads to delayed payments because sometimes.... [there is lack of] regular support to the providers in terms of training to ensure that they fill in the documents correctly." FGD1 – Social Health Franchises

"... I remember when NHIF used to use free maternity service now they changed to Linda mama, we really lost some quite amount of monies in the change because there was no training on how to claim the Linda mama." FGD 1 – Public health providers

The use of online platforms to communicate on policy changes and instructions was discussed as a solution.

3. Governance challenges

Stakeholders highlighted three key governance challenges that hindered effective provider-purchaser engagements. One was bureaucratic processes that delayed reimbursement of claims. For instance, providers reported complicated administrative procedures, especially with the NHIF, when claims are submitted for payment. The claims may have to go through several departments at the branch level and then at the NHIF headquarters.

"I can say that ...there is a lot of bureaucracy also on NHIF that we have a satellite office, we have the branch level, but you see now all the decisions [especially on payments] are also done at HQ." FGD 2 – Public Health Providers

"Insurances have bureaucracies.... within approvals – you realize that it has to go around four departments for it to be paid." FGD 1 – Private health providers

Besides the bureaucratic procedures at NHIF, other bureaucracies with the national treasury have caused financial delays from the national treasury to NHIF and, in turn, delays from NHIF to providers. For instance,
poor budget projections and challenges with cash flow and revenue collection result in delayed remittances of funds from the national government/treasury to NHIF (for schemes such as EduAfya and Linda Mama).

"Linda mama is a government-funded scheme implemented by NHIF, and the public facilities treat the Linda mama cases, and forward claims for settlement to NHIF and the ministry is actually the sole implementer of the program, the Linda mama program and the main funder for the program. So basically, the Linda mama – we can only settle the Linda mama claims upon receipt of the premiums from the ministry. So usually, delays are occasioned by late settlement of the Linda mama premiums." – IDI 1 - NHIF staff, National level

"Well, upon following up and – I think sometimes the issue is on the insurers’ side because as we are speaking right now, Linda mama, NHIF has not paid since the month of November and we’ve been very consistent with our claims. So, when we follow up on that the reason that we get is delay in funding from the national level." – FGD 1 – Public providers

"...actually, the main reason for delay of payment is because of depressed cash flows on the insurance companies' side, that's the purchasers side." – FGD 1 – Medical Professional Bodies representatives

Second, there were poor accountability mechanisms from both providers and purchasers. Notably there are no clear mechanisms that allow oversight for the purchasers especially from the public sector, hence all complaints can only be channeled to the insurer only. For instance, the private health insurance providers were well regulated by the Insurance Regulatory Authority (IRA), however, that was not the case for NHIF. It was noted that although NHIF reports to MoH it remains autonomous and hence an authority to itself. There are however some opportunities to raise complaints against the fund through the board of directors. There were no adequate monitoring arrangements that guard against corruption and fraud. For instance, private healthcare providers highlighted bribe demands from NHIF officers to enable their facilities to be empaneled. As a result, there were delays in empaneling private providers, development of mistrust and inequalities in empaneling providers in rural settings.

"I dare say this, some elements [people] within the insurance [NHIF] would want to have their hands oiled in order to have you empaneled." – FGD1 – Private healthcare providers

Additionally, some private providers submitted fraudulent claims either for services not rendered or services to a patient other than the beneficiary.

"Again I’ve seen, and I’ve heard service providers and especially when we don’t have numbers, and especially when we are also frustrated, we tend to, yes you know this is a fraudulent case, but you go ahead and process the claim which I think it's not the right thing." – FGD 2 Private healthcare providers

Third, there was no formal communication platforms/channels that purchasers and providers could engage. The lack of, inadequate utilization of, or the use of communication channels unfriendly to providers contributed to poor communication and ease of access to feedback on challenges. Besides, providers also highlighted their engagement with NHIF as being more directive (from NHIF) rather than consultative. These led to a communication breakdown as information from purchasers did not reach providers or providers did not know the right channel to address specific issues.
"I think one of the main reasons is that there is no formal channels of communication as in there is no established mechanism for communicating for instance now a med sup in a particular facility which has challenges does not know whether he or she should communicate directly to the regional manager or branch manager for NHIF or should communicate through the director. So there is no that formal engagement between NHIF and the department of health and even the facilities on how they’re going to resolve the various outstanding issues regarding claims and payments and around that – in that regard so there is no that formal communication or engagement meetings between the department of health and NHIF and even other purchasers on how to solve issues regarding claims.” FGD 1 – Public Providers

**Actionable solutions to addressing challenges hindering effective provider-purchaser engagements**

The participatory approach of bringing together the purchasers and providers that was adopted during the study allowed us to not only look at the root causes but also engage in proposing solutions that can be applied by stakeholders (purchasers, providers, patient groups). Several actionable solutions targeting the root causes of the challenges faced by both providers and purchasers were also identified. These actors felt that adopting technology to automate processes, employing more staff, building staff capacity, and strengthening the regulators’ action would solve identified challenges. These are discussed below.

1. **Adopt technology**

Prepaid schemes in the health sector are data-intensive all the way from membership data (individual and corporate members), benefit packages, lists of providers and procedures that are payable, essential inputs such as devices and medical supplies, access to the membership data by providers to identify the bona-fide members, limits on benefits, provider lists among others. To navigate this large data base of information needed, automation was identified as the main solution to most of the root causes identified by stakeholders. Particularly technology was thought to aid the automation of claims and patient identification at the facility (e.g., through biometric systems for NHIF). For instance, providers highlighted the potential of automated systems in removing documentation challenges resulting from errors while submitting claims manually, ease of invoicing and its utility in fast-tracking claim submissions, reducing bureaucratic processes and guarding against fraud.

"And the issue of invoicing, you know, it should be like an automated system because if everything is in the system why should you wait for an e-mail to be told that you make an invoice of this much by just a text. Then this whole thing is – we don't have control fully. And I wish that they could make that system in place so that – you know, it's not that we manipulate anything." FGD 2 – Medical Professional Bodies representative.

"I can't overemphasize the issue of improving the system. I know facilities can visualize the purchase of claims made and for what service, but I think that there is an opportunity to automate the claiming system especially as we move towards implementing UHC." FGD 2 – Public health providers.

Automation will further introduce transparency and efficiency to help reduce turnaround times for the key operational issues, reduction in errors, reducing duplications and enhanced communications, detection of fraud and compliance to regulatory instructions both for the providers and purchasers.

2. **Engage/Prioritize staff for handling payment processes**
Human resource gaps emanating from understaffing and/or staff turnover was a root cause for the challenges experienced by providers and purchasers. Providers especially in the public sector highlighted the need for more staff preferably dedicated to the payment process, for instance, lodging claims, following up with delays in reimbursements and acting as the liaison persons with purchasers for ease of communication and addressing of challenges. While more staff need to be engaged/prioritized for handling payment processes, there is also a need to establish human resource management and accountability mechanisms. For instance, there is a need to institutionalize staff performance management to promote improvement on performance and effective engagement for new staff.

3. Capacity build: Conduct routine provider training

Capacity gaps across both private and public providers were highlighted as a major root cause for a majority of the challenges highlighted by providers. Regular training was identified as the most effective solution to address capacity gaps among providers. Healthcare providers highlighted a preference for more regular (quarterly) refresher training that can leverage on the online platforms (such as Zoom, Microsoft Teams etc.) that would be less costly to deliver but with a wider reach to providers. The use of self-care mechanisms to allow providers access answers to frequently asked questions and sharing access to data for the different schemes would reinforce training.

"...Yeah, now for the trainings we would prefer quarterly trainings – every quarter because like for our side the clerical officers are on a casual basis, so we have changes every few months." FGD 1 – Public Health providers

To actualize the routine training, there is a need for institutionalizing provider capacity development as a role of purchasers.

Besides, purchasers recommended that providers should train/capacity build more than one staff either during the formal training sessions or internal health facility trainings (using trained staff) to avoid capacity gaps in case of a staff turnover. For instance, the NHIF

"...we are telling them [providers] in the training is they should make sure that they share the information with their colleagues within the hospital and administrators in the respective facilities we are also advising them to continuously bring on board staff to make sure that what is happening – something that they understand just to make sure that in case there is a turnover of specific officers or staff that have been trained, the facility will not face any challenge." IDI 1 – National NHIF Staff.

Stakeholders also highlighted the capacity building in the workshop as an avenue for fraud management. Staff can be trained on fraud management approaches and ways to monitor these both at the provider and purchaser levels.

4. Develop and utilize formal communication channels

Purchasers need to establish working communication channels to engage providers in sending and receiving feedback, complaints and changes to the benefits package. Providers would then adapt these channels to facilitate communication from the facility liaison person or administrator in case of staff turnover.
"I think one of the main reasons is that there is no formal channels of communication as in there is no established mechanism for communicating or engagement meetings between the department of health and NHIF and even other purchasers on how to solve issues regarding claims. So I think when there is an established mechanism of how issues or how challenges are being resolved or how to resolve them or even SOPs on how we can resolve particular issues I think that's the missing link in terms of communication between NHIF and the facilities and even the department of health." FGD 1 – Public health providers

"They also need to improve on communication and engagements that they need to view facilities as the stakeholders in terms of – so that communication should really flow and we really urge that they need to open that." FGD 2 – Public health providers

5. Review provider payment mechanisms and rates

Both providers and purchasers highlighted the need to revamp existing provider payment mechanisms to incorporate incentives for providers to improve on the equity, efficiency, and/or quality of care provided. For instance, providers highlighted a challenge with existing capitation payment, given that the rate is low and has never been reviewed since its introduction in 2015. Furthermore, interviewees highlighted the need to shift to output-based payments with incentives for improving quality and efficiency.

"...there is a need to review the provider payments rates periodically. Some rates, for example the capitation payment rates, have never been reviewed since their introduction in 2015...this has to change." IDI 1 – National NHIF Staff.

6. Develop a framework for public-private contracting

Private purchasers highlighted the lack of a proper framework to contract public providers as a key challenge hindering their engagement and harnessing the public sector network of providers. Consequently, private purchasers during the workshop highlighted the need for a clear framework that would allow the contracting of public providers of all levels by the private purchasers. Incorporating this would not only improve the list of available providers for private health insurance subscribers but also create competition among providers that can promote health system goals and provide another source of revenue for public providers. This would also further strengthen the cost-containment that would benefit both the purchaser and clients.

"It is not easy at all to contract public providers especially at the lower level. There is no clear framework on how county facilities should be contracted by private purchasers…. only at the National Referral facilities that some have been contracted by us." FGD 1 – Private Purchasers

While all the level 2 to 3 are under the oversight of county governments since 2013, there has been mixed results on the effectiveness of how they are administered. County Governments need to allow health facilities to have financial and managerial autonomy to allow them to actively participate in contract management and playing their role as providers in their operational and strategic engagements with providers. This improves the ability of public providers to participate in strategic purchasing.

Discussion
Kenya has made both political commitments through President Kenyatta’s Big Four Agenda and established the frameworks to institutionalize the UHC agenda. To implement these, Kenya has prioritized purchasing reforms in moving towards UHC (4, 14). Although previous studies have defined the best practices, often referred to as strategic purchasing actions, that purchasers should adopt in relation to providers (2, 8), the engagement between providers and purchasers has remained with several challenges. In this study, we assessed the challenges hindering effective provider-purchaser engagements in the Kenyan context and proposed solutions targeting the root causes to those challenges.

Our study found provider-purchaser challenges resulted from gaps in resource inputs (human, infrastructure), communication gaps, capacity gaps, and governance challenges. To address these challenges, the study proposed the adoption of automated processes, reviewing of provider payment mechanisms (PPMs) and update their rate – with clear mechanisms for periodic review, regular training of providers, and the use of provider-friendly communication channels as solutions to identified challenges. These can be explained.

First, while, inter alia, the strategic purchasing actions require the purchaser to select providers, establish payment rates, audit provider claims, and design provider payment mechanisms (2, 6), the execution of these actions largely require the availability of human resources, and adequate systems, particularly technologies for both contracting and reimbursing providers. Until the end of the study, the main purchaser in Kenya – the National Health Insurance Fund (NHIF) – was using manual mechanisms for reimbursing providers. Automated provider registration and claim reimbursement systems have been shown to promote efficiency in claims, reduce fraud and promote better provider-purchaser engagements in other settings. For instance, a study in South Korea indicated an increase in claims as a result in changing from manual systems to an electronic claim management system (15). It’s not surprising that such automated systems can reduce the errors in submitting claims in a manual process but also the heavy human resource requirement. Similar benefits have been shown through the introduction of the e-claim system in Ghana (16).

Public providers have indicated a lack of financial autonomy that affects managerial decision making (17). This is because in some counties, all resources including reimbursements to health facilities have to flow through the single treasury account of the sub-national government (i.e county revenue fund (CRF) rather than to own facility accounts. For instance, a recent study found that hospitals in four counties did not have access to revenues due to the requirement to send funds to the CRF (18). This then hinders both hiring and sustaining casual staff leading to staff shortages emanating from lack of hiring or high staff turnover. Similar legal and regulatory bottlenecks to strategic purchasing have been identified in previous study in Iran (19).

Third, capacity and communication gaps also hindered effective provider-purchaser engagement. Studies in Kenya and other settings have highlighted both poor capacity and communication gaps for lodging claims and understanding of benefits packages. For instance, a recent study in Kenya has highlighted poor communication and understanding of the Linda Mama benefits package among providers (20) which affected their delivery of services. Similar findings have been reported in other settings (21). While trust acts as a glue to the relationship between providers and purchasers, poor communication can lead to mistrust and therefore ineffective engagement between providers and purchasers. For instance, Overland shows that providers continue to distrust purchasers especially where communication is poor (22).
Fourth, while provider payment mechanisms are central to provider-purchaser engagements, our findings are similar to those reported in other studies in Kenya, where providers indicated that existing PPMs were marred with low rates, unpredictability in time and amount, and lacked periodic revision (18, 20, 23, 24). For instance, Obadha et al. also reported that health facility managers felt that capitation payment rates were low and needed to be revised (24). Undoubtedly, effective revamp is necessary to ensure that PPMs elicit the right behaviours and are used as incentives by purchasers. For instance, a recent review highlighted the importance of PPMs in influencing provider behaviour among providers (25). In another study in Kenya, health facility managers highlighted their preference for timely, predictable, and higher-rate capitation PPM (26), further solidifying the findings from our study.

The strength of this study is that it included a wide range of stakeholders in the health system in Kenya. Providers from the public and private sector were engaged; purchasers – including the NHIF and private purchasers – as well as regulators were engaged in the study. To the best of our knowledge, this is the first study that examines providers and purchasers to this extent and proposes actionable solutions to challenges hindering provider-purchaser engagement using a coaching and mentoring approach. While this approach is important in diagnosing challenges within a health system context and jointly agreeing on the root causes and solutions across all stakeholders, a key limitation is that findings may not be generalizable across different settings. Based on the framing of the key root causes and potential solutions identified from this study, this study could form a basis for developing and testing theories of change for interventions aimed at strengthening strategic purchasing within countries like Kenya.

**Conclusion**

Promoting effective provider-purchaser engagements can be leveraged as an approach to enhancing Kenya's health system reforms towards achieving UHC. Our findings highlight the need to prioritize interventions targeting human resource gaps, communication gaps, accountability gaps, staff capacity gaps, provider payment mechanisms and rates, and infrastructure gaps to promote harmonious and collaborative engagements between providers and purchasers. Such reforms may include; the adoption of health information systems or technology to automate processes (both on empanelment and payment), review provider payment mechanisms, train staff on claims management and establish clear communication strategies between providers and purchasers.

**Abbreviations**

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>COG</td>
<td>Council of Governors</td>
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Declarations

Ethics approval and consent to participate

The study received ethics approval from the Kenya Medical Research Institute / Scientific and Ethics Review Unit (KEMRI/SERU). Participants also provided informed consent prior to participating in the study. All methods were performed in accordance with the relevant guidelines and regulations (Declaration of Helsinki).

Consent for Publication

Not Applicable.

Competing Interests

The authors declare that they have no competing interests.

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Data availability statement

The data generated and analysed during the qualitative study are not publicly available due to them containing information that could compromise research participant privacy. However, the transcripts are available from the corresponding author [JK] on reasonable request.

Author contribution

JK, AN, BM, AM, OB and BK designed the study. All authors access to all data in the study and take joint responsibility for the integrity of the data and the accuracy of the data analysis. JK drafted the manuscript. All authors contributed to the analysis and interpretation of the results. All authors contributed to subsequent reviews of the manuscript and gave final approval for the version to be submitted.

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