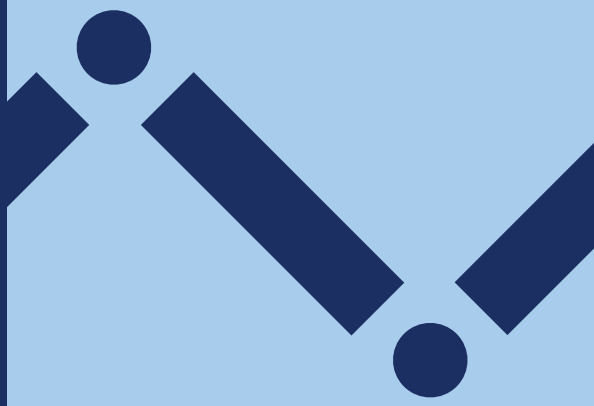
Financial and non-financial information flows in the Kenya health sector: a pathway to health system accountability

October 2024



IDinsight

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About IDinsight

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Abbreviations

ADP	Annual Development Plan
APR	Annual Progress Report
BOM	Board of Management
CBEF	County Budget and Economic Forum
CEC	County Executive Committee
CHMT	County Health Management Team
COBMIS	Controller of Budget Management Information System
COG	Council of Governors
CSO	Civil Society Organisation
DSA	Directorate of School Audit
EMR	Electronic Medical Record
GF	Gates Foundation
GoK	Government of Kenya
HMIS	Health Management Information System
IBP	International Budget Partnership
IFMIS	Integrated Financial Management Information System
IGRTC	Intergovernmental Relations Technical Committee
KNBS	Kenya National Bureau of Statistics
KHHRAC	Kenya Health Human Resource Advisory Council
KHIS	Kenya Health Information System
MDAs	Ministries, Departments, and Agencies
MOH	Ministry of Health
MTEF	Medium-Term Expenditure Framework
OAG	Office of the Auditor General
OCOB	Office of the Controller of Budget
PER	Public Expenditure Review
PFM	Public Financial Management
PHC	Primary Health Care
PSASB	Public Sector Accounting Standards Board
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
TSC	Teachers Service Commission
UHC	Universal Health Coverage

Definition of terms

Non-financial data refersto information not directly related to monetary transactions but is crucial for understanding and evaluating healthcare services' performance, quality, and impact. These data include metrics and indicators that describe various aspects of healthcare delivery, such as patient outcomes, service utilization, clinical quality, patient satisfaction, and operational efficiency (Vélez-González et al., 2011).

Data integration is when related information from various sources is merged to create a comprehensive and unified dataset, building a basis for analysis across different spectrums to inform decisions (Bradley et al., 2010).

Systems integration in health is the process of merging and consolidating healthcare information systems to establish a unified view of health delivery and streamline workflows (Ziminski et al., 2016).

Systems interoperability is the process of enabling health systems to exchange information with each other, allowing actors to have access to complete financial and non-financial information.

Accountability refers to the range of processes, mechanisms, and practices applied by stakeholders concerned with a service to ensure a desired level and type of performance. It requires both answerability regarding decisions made and the possibility of enforcing sanctions or remedies should the responsible entity not fulfill its obligations (Hilber et al., 2016; Paul, 1992).

Financial accountability involves examining an institution’s compliance with laws, regulations, and procedures for transparently allocating, spending, and reporting financial resources (Brinkerhoff, 2004).

Performance accountability refers to an institution being answerable for its services, outputs, and program results against the agreed-upon targets (Brinkerhoff, 2004).

Vertical accountability is achieved when right-holders, such as citizens or civil society groups, hold duty-bearers, such as the government, to account for their actions (Atela & Wafula, 2015).

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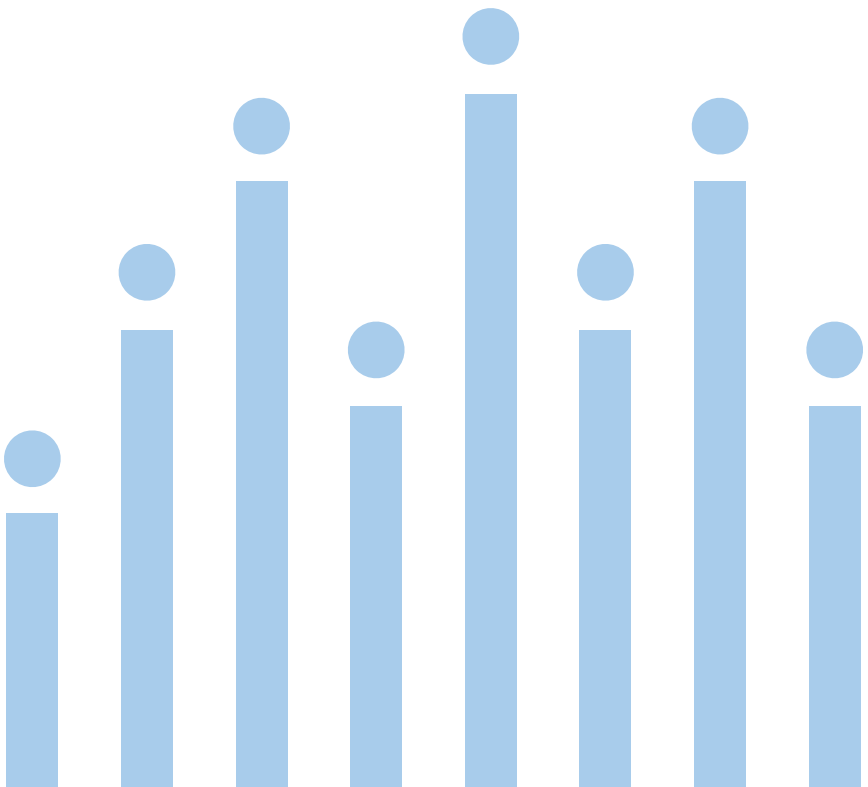


Executive Summary

Background

Strong health systems rely on robust data and evidence - financial and non-financial -, to design effective policies and interventions and to enhance accountability. Kenya has made significant efforts in streamlining and documenting resource flows in the health system. However, gaps remain with regard to the upward flow of financial and non-financial information, the integration of both types of data for decision-making, and how the integration supports health system accountability. The current information flow and accountability process primarily captures financial information. There is little to no integration with non-financial health information (activities, service outputs, and outcomes), thereby limiting rather than enhancing accountability.

In response to these gaps and challenges, IDinsight, in partnership with the Gates Foundation, mapped Kenya's health system's financial and non-financial information flows and explored the pathways to accountability in the data flow process. This report presents the findings of that exercise, undertaken between September 2023 and June 2024. As a separate but interlinked piece, we collaborated with Expertise Global, a public finance management consulting firm based in Nairobi, Kenya, to conduct a sector comparator study with the education sector. We present the comparative analysis in this report, highlighting the practices from education that could apply to the health sector.

Study Approach

We reviewed reports, publications, and datasets from databases and systems pertinent to Public Financial Management (PFM) and accountability within Kenya's health sector, including the Kenya Health Information System (KHIS). We purposively sampled key stakeholders with visibility on the data flow process for interviews. We then analyzed and coded the responses by key themes, then validated the findings with sector experts and stakeholders.

Key Findings

The key findings from this landscaping exercise are as follows:

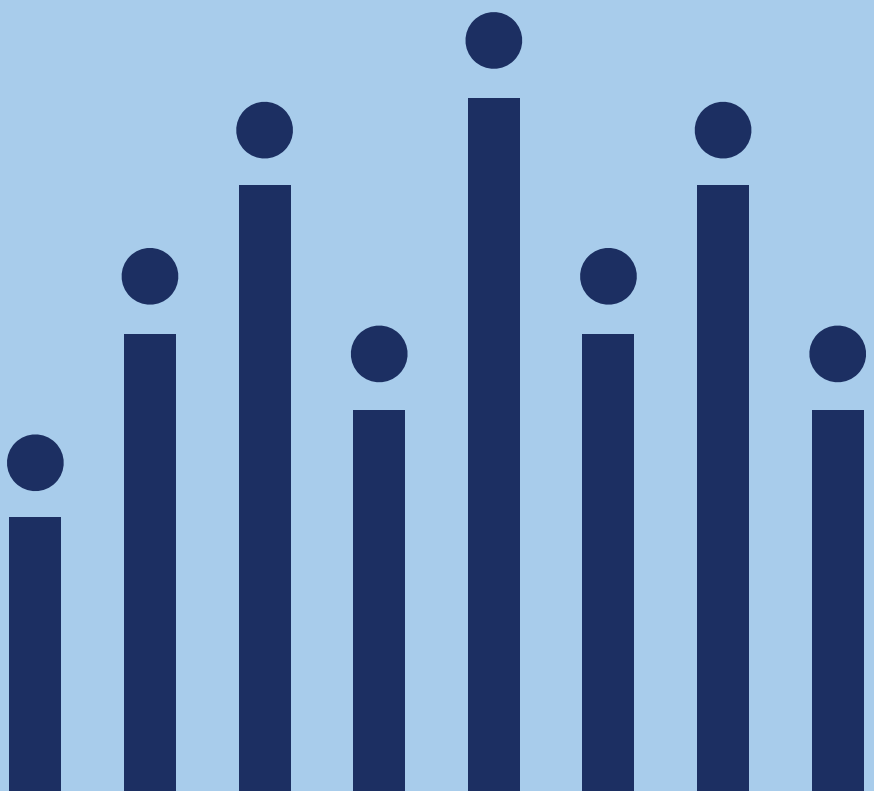
- **Overall, the integration of financial and non-financial health data is limited; when it happens, it is ad hoc.** This is partly due to the lack of a definitive framework to guide the integration of financial and non-financial health data. **As a result, it is difficult to ascertain if the allocations within the health sector budget (determined mainly by planning ceilings) and made on a line-item basis are effectively allocated to priority health programs.**
- **The Kenya Health Information System (KHIS) is the central platform for aggregating and reporting health non-financial data in Kenya in a coordinated hierarchy from the community, facility, sub-county, and county levels to the Ministry of Health.** Health Records Information Officers (HRIOs) at the facility and sub-county levels manage and report this data. While local facilities diligently collect health data, they often fail to utilize it effectively for performance review, strategic planning, and monitoring. There is also limited evidence on how this data is shared with Public Financial Management and accountability stakeholders, resulting in poor tracking of health outcomes against budgets and weakened oversight of health funds, increasing the risk of fund diversion.

- **The Integrated Financial Management Information System (IFMIS) is the main system for budgeting and financial reporting for all sectors.** However, KHIS and IFMIS are not interoperable, hindering the integration of financial and non-financial data. This lack of interoperability makes it challenging to access and analyze both sets of information simultaneously, hindering informed decision-making.
- **Accountability is not solely the responsibility of one stakeholder; it involves a multifaceted participation of various actors,** e.g. (the County Assembly, the Office of the Controller of Budget (OCOB), the Office of the Auditor General (OAG), and Parliament, etc). This complexity obscures who is accountable to whom and for what and presents ample opportunities to shift blame between stakeholders. At its worst, this leads to growing governance problems that limit the ability of health sector managers to comply with multiple accountability demands and thus act effectively.
- **Although Kenya's health and education sectors have relatively similar accountability frameworks, the education sector has a better-coordinated decentralized accountability structure.** Compared to similar-level health facility management committees, School Boards of Management play a key role in planning and accountability, with a defined mandate to approve budgets and monitor school performance. **The Directorate of School Audit (DSA) is responsible for auditing schools to promote accountability. The health sector lacks a similar institution to audit health facilities.** This happens even though sub-county facilities exercise new decision-making powers, e.g., in the use of Facility Improvement Financing.

Conclusion and Implications

The findings from this landscaping exercise could inform improvements in critical decisions such as health budgeting, development of health policies, strategic planning, and enhancing health system accountability. Below, we highlight some areas for consideration and action:

- **Develop clear outcome-based guidelines and templates for capturing and reporting non-financial information.** The government should emphasize the capture and utilization of non-financial information by all government institutions to support and justify financial expenditures. The National Treasury and the Ministry of Health MOH can develop a framework to guide the capture and reporting of non-financial health information and mandate an institution to coordinate this role. Housing this information in one place would enhance its utilization by actors responsible for holding the health sector accountable.
- **Institutionalize a framework for integrating financial and non-financial information at both the county and national levels.** Integration would ensure relevant stakeholders have easy access to complete information to inform health resource allocation decisions, thereby improving health delivery. The MOH and the National Treasury could collaborate to develop the integration framework.
- **Establishing a formal institutionalized incentive structure for reporting non-financial data** could improve the information flow process and ensure the timely availability of quality health data to inform health programming and accountability efforts.
- **Identify and support a well-coordinated platform for enhancing accountability at the national and county levels.** Numerous actors are mandated to ensure accountability for health finances and performance at the national and county levels. Proper coordination of these actors and their roles is key to enhancing their effectiveness. Strengthening joint working groups between the finance and health teams, as well as partnerships between accountability duty-bearers and right-holders, could enhance the utilization of health resources, resulting in improved health outcomes.
- **Enhance financial and health information systems interoperability.** The National Treasury and MOH should consider interoperability between KHIS and IFMIS to allow the systems to exchange information, easing the process of integrating financial and non-financial information.



1. Introduction

1.1 Background and motivation for the study

This report maps Kenya's health system's financial and non-financial information flows and explores the pathways to accountability for better public service delivery. It results from a health sector landscaping exercise, conducted by IDinsight between September 2023 and July 2024, in partnership with the Gates Foundation. The study was designed to address information flow gaps identified through a literature review and consultations with sector experts. The findings speak directly to and can be applied to inform improvements in critical decisions such as health budgeting, development of health policies, strategic planning, and enhancing health system accountability.

Effective use of financial and health data for accountability[1] is essential for a strong health system. Kenya has made significant strides towards this goal through investments in documenting resource flow in the health sector. Much of the effort has been spent documenting the downward flow (from the national government to counties). However, this has left significant knowledge gaps in the upward flow of financial and non-financial information (from counties to the national government) and in the use of the data for decision-making across the health system. Yet, this knowledge is important for strengthening critical health system goals and processes (accountability) as the country moves towards universal health coverage by strengthening its primary health care (PHC). While the flow of financial resources from the national or county level to health facilities is clearly mapped out, little is documented about the upward flow of integrated financial and non-financial data—a necessary condition for the effective functioning of accountability mechanisms.

This study addresses the gaps identified through the literature review on health financial and non-financial data flow and its linkages to accountability in the Kenya health system. The findings emanate from a landscaping exercise to map the data flow process, determine which institutions have an accountability mandate, and ultimately explore, with stakeholder input, area(s) for strengthening health system accountability levers to enhance public sector service delivery and strengthen public finance management processes. IDinsight worked with Expertise Global, a public finance management consulting firm headquartered in Nairobi, to conduct a parallel comparative study on the education sector. The comparison enabled the exploration of best practices in the education sector that could inform reforms in the health sector. We then validated emerging insights and recommendations with the stakeholders.

The report is structured as follows:

- The **methodology section** describes the study approach, outlines the research questions, study participants' selection criteria, data collection, analysis and validation.
- The **findings section** details the results of the health landscaping exercise, focusing on accountability structures within the health information flow.
- The **comparative analysis section** highlights the similarities and differences in the information flow and accountability of the health and education sectors. It provides insights on some best practices from education that could be adapted to health.
- The **conclusion and recommendations section** outlines our recommendations based on the landscaping findings. It proposes an implementation plan to inform the actions and activities to enhance accountability in the health sector.

1 For purposes of the study, we considered accountability to include the range of processes, mechanisms, and practices applied by stakeholders concerned with a service to ensure a desired level and type of performance (service outcome).

1.2. Methodology

The study employed a mix of document and systems reviews, in-depth interviews with key stakeholders at national, county, and development partner levels, and discussions with sector experts to map the financial and non-financial data flows and the attendant accountability pathway. Below, we explain each of these processes.

1.2.1 Research questions

The study's overall objective was to map the financial and non-financial information flow and explore the accountability structures within Kenya's health sector. Specifically, the study aimed to:

1. Map which institutions have a constitutional accountability mandate in the health sector.
2. Map financial and non-financial data flows within Kenya's health system with a focus on upward reporting and accountability from the facility to higher administrative levels.
3. Analyze the status of health sector financial and non-financial data integration and assess how improved integration may further strengthen health system accountability.
4. Compare the health information flow process and accountability structures with the education sector.
5. Identify interventions to improve health health system accountability, drawing on financial and non-financial data flow.

This was achieved through the following research questions:

1. How does health sector financial and non-financial information flow between counties and the national government, and what accountability mechanisms exist to support financial and non-financial data flow in the health sector?
2. How and at what levels do financial and non-financial indicators integrate, and how is the data utilized to enhance existing accountability mechanisms?
3. How do the health sector information flow and accountability structures compare with the education sector?

1.2.2 Desk Review

We reviewed various secondary sources, focusing primarily on the period after devolution (2010-2024), and examined national-level policy documents related to health (see Table 5 in Appendix 1). These included reports, publications, and datasets from databases and systems pertinent to PFM and accountability within Kenya's health sector, including the Kenya Health Information System (KHIS).

1.2.3. Key Informant Interviews

We conducted Key Informant Interviews (KIIs) with purposively health sector policy practitioners and experts with knowledge and experience of Kenya's health sector data flow and accountability systems to generate primary insights on financial and non-financial data and the links to accountability. We conducted 30 interviews between December 2023 and May 2024 (see Table 6 in Appendix 2). The key informants and our expert panel also referred and introduced the study team to other key stakeholders at the national and county levels (i.e., Kilifi, Nakuru, Nairobi, and Trans-Nzoia counties). We mapped the key institutions and stakeholders in the Kenya health sector with an accountability mandate.

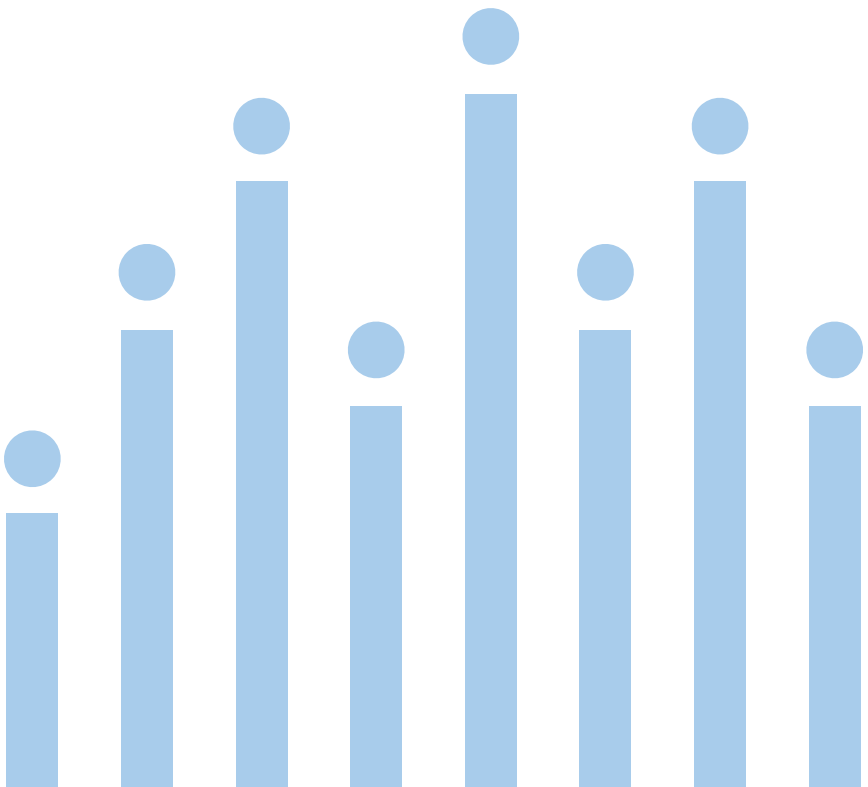
Consultations with sector experts informed county selection, an assessment of the county's advancement in implementing health financing reforms, availability and accessibility of data, prioritization of the health sector by the county administration, and the feasibility of visiting the county to collect data. See Table 7 in Appendix 3 for the detailed County selection criteria applied.

1.2.4. Data processing and analysis

We applied an iterative approach in coding and analyzing the qualitative data. Interview transcripts were reviewed and updated against interview notes taken by multiple study team members. Where interviews were recorded verbatim, the digital record was transcribed, and read by more than one study team member who extracted key takeaways for each question. The data was analyzed by coding a subset of key questions to extract themes, followed by compiling the key findings based on the identified themes.

1.2.5. Stakeholder validation

As a final step, we conducted a validation workshop with key stakeholders to verify our findings. We engaged all the study participants and key health sector experts to review the draft findings to confirm and validate the results. We incorporated feedback from the validation workshop into a report. The findings are outlined and discussed in the sections that follow.



2. Accountability and the Kenya Health System

Although accountability is recognized as crucial for enhancing public sector service delivery, the concept remains complex, contentious, and vague (Atela & Wafula 2015). In this section, we define accountability in relation to the Kenyan context and its application and relevance to the health sector.

2.1. Understanding Accountability

Accountability is established when an individual or institution justifies their actions to another person or group who oversees their activities. In the public sector, **it involves elements of answerability** - the ability to ensure government officials explain and justify their actions, and **enforcement** - the capacity of oversight institutions to impose sanctions when certain rules of conduct are violated (Camargo & Jacobs, 2013). In the health system, it entails the right mix of structures and processes that sustain those structures to produce desired outputs and outcomes (Atela, 2013). As a means of creating value, accountability could be implemented through non-financial data disclosed along with financial data (Manes-Rossi et al., 2018). Policymakers who are working to ensure better health outcomes, efficient spending, and increased allocation to priority populations, programs, and services **need strong performance accountability mechanisms.** This requires a combination of financial and non-financial data to better align with public budget officials who are charged with ensuring expenditures in the health sector are transparently applied and financially accountable.

A financially accountable health system has institutions that comply with laws, regulations, and procedures for the transparent allocation, expenditure, and reporting of financial resources (Brinkerhoff, 2004). Robust accountability mechanisms - internal controls, timely budget reporting, good financial management, auditing, and other accountability measures orient the health system towards PHC goals of equity, efficiency, and sustainability (Cashin et al., 2017). Accountable health systems allow stakeholders to use non-financial data (activities and service outputs) and financial data (commitment and disbursement of financial resources) to assess service delivery results against budget-linked performance benchmarks or output targets.

2.2. Accountability in the Kenya Health System

Kenya's health sector legal and policy framework recognizes the significance of data-driven decision-making and accountability. The Kenya Health Policy 2014 – 2023 (MoH, 2014), Kenya Universal Health Coverage Policy 2020-2030 (MoH, 2020), the Public Finance Management Act 2012 (GoK, 2012), and the Constitution 2010 (GoK, 2010) identify accountability as a fundamental principle to guide public service delivery. The coherence—or lack thereof—between devolution, health financing, and public financial management procedures in the health sector can significantly impact a nation's ability to achieve universal health coverage (Ravishankar et al., 2024). **Devolution granted county governments greater fiscal autonomy in resource management but also brought forth a convoluted mechanism for funds flow, impacting the health system accountability processes** (Vilcu et al., 2020).

Atela & Wafula (2015) mapped accountability mechanisms in Kenya's health system, classifying these into four broad categories - political, legal, fiscal, and administrative. Fiscal accountability mechanisms in Kenya's health sector involve various processes and actors across different levels, including Parliament and independent oversight institutions. For instance, **the Office of the Auditor General (OAG) conducts an annual financial audit by assessing whether public entities such as** level 6 hospitals under the National Government and level 1-5 hospitals under the county government **have used the public resources entrusted to them lawfully and effectively.**

Fiscal accountability is vital for monitoring the use of vast resources, given that health constitutes a major budgetary expenditure in Kenya. For example, the budgetary allocation for the health sector increased from Ksh. 120.8 billion (USD 936 million) in FY 2020/21 to Ksh. 129.8 billion (USD 1 billion) in FY 2021/22 but then dipped to Kshs. 116.4 billion (USD 902 million) in FY 2022/23 (GoK, 2023a). The actual expenditure for the period was Kshs. 105.5 billion (USD 818 million), Ksh. 109.4 billion (USD 848 million), and Ksh. 98.7 billion (USD 765 million) for FY 2020/21, FY 2021/22, and FY 2022/2023, respectively, translating to absorption rates of 87.5%, 84.3%, and 84.8% (ibid).

Despite the increased government expenditure on the health sector, significant improvements in key health outcomes remain elusive. For instance, between FY 2018/19 and FY 2020/21, the maternal mortality rate stagnated at 362 deaths per 100,000 live births, with only a marginal decrease to 355 deaths per 100,000 live births in FY 2021/22 (KNBS & ICF, 2023). Given Kenya's annual birth rate, this translates to nearly 5,000 women and girls dying annually due to pregnancy and childbirth complications. Alarmingly, over 80% of these maternal deaths are attributed to poor quality of care, despite the increased health expenditures. Similarly, the neonatal mortality rate saw minimal improvement, dropping from 22 deaths per 1,000 live births in FY 2018/19 to 21 deaths in FY 2019/20 and stagnating at 21 deaths in FY 2020/21 (ibid). These trends suggest that available resources could have been better utilized to meet the population's health needs and reveal a disconnect between increased health spending and the impact on critical health outcomes.

Relatedly, the budget implementation reviews conducted by the Office of the Controller of Budget (OCOB) are crucial in promoting financial accountability and management of public resources at both the county and national levels. OCOB reports analyze the release of funds to the Ministry of Health, subsequent transfers made to the County Governments for health delivery, and actual expenditure against the budget allocations for a given period. Figure 1 summarizes these processes and institutions. **Additionally, monitoring and reporting frameworks, including the Public Expenditure Review (PER) for Health, the Public Expenditure Tracking Survey for Health, the System of Health Accounts, and the National and County Health Budget Analysis Reports, are also key in ensuring financial accountability.** Policymakers utilize these reports to examine whether health allocations were directed to cost-effective programs and activities and assess compliance with the Public Finance Management Act 2012 (GoK, 2012).

On the other hand, administrative and performance accountability refers to an institution being answerable for its services, outputs, and program results/outcomes against the agreed-upon targets (Brinkerhoff, 2004). Performance accountability is linked to financial accountability since the financial resources to be accounted for are intended to improve health outcomes and results. However, while financial accountability emphasizes procedural compliance, performance accountability concentrates on health outcomes and results.

2.3. Designated actors with accountability mandate

This section describes **the various actors with accountability mandates within the health sector at the county, national, and intersection of the two levels.** We assessed each actor's mandate in regard to their role in ensuring that resources allocated for health are utilized effectively (financial accountability) and that the financial expenditures can be justified by the resulting health outcomes (performance accountability).

Overall, **the national government retains significant responsibilities and oversight functions to ensure a cohesive, efficient, and high-quality health system despite health services delivery being devolved. At the county level, the County Assembly is the primary oversight institution mandated to oversee the county executive and approve plans for optimal resource utilization (GoK, 2010).** Besides the county and national level actors, there are other actors at the intersection of the two levels of government whose roles are core in promoting accountability. Below, we summarize all these institutions and actors with whom accountability lies. A detailed analysis of the role of each of these actors is captured by Atela and Wafula (2015) in their study mapping accountability mechanisms in Kenya's health system. Table 4 under Appendix 1 also provides more details on the mandate of these actors, the key challenges they face, and proposed solutions to address the challenges.

1. The Office of the Controller of Budget (OCOB)

The OCOB is an independent oversight office that draws its mandate from Article 228 of Kenya's Constitution. Its core functions are to approve withdrawals from public funds and oversee the implementation of both national and county government budgets. Despite the critical functions of the OCOB, evidence from our study found that the OCOB faces several challenges, including limited access to non-financial information and poor linkage of financial and non-financial information by counties when submitting their reports. OCOB's accountability mandate could be enhanced by incorporating the use of non-financial information, such as health outcome indicators, to assess the results of the utilization of health resources in various programs.

2. The Office of the Auditor General (OAG)

The OAG is mandated to audit and report on the utilization and management of public resources by national and county government entities. Our study findings were in line with existing evidence on challenges associated with audits being mainly post-facto processes, impacting the utilization and implementation of findings and recommendations found in audit reports.

3. The Parliament

The Senate and National Assembly play pivotal constitutional roles as watchdogs and enforcers of recommendations from other oversight institutions. In the health sector, through designated Senate and National Assembly Health Committees, they review health reports, question government officials, and investigate issues such as budget allocations, healthcare delivery, and the effectiveness of health programs.

4. The National Treasury

The National Treasury plays a paramount role in the budgeting-making process. However, the budgeting process mainly relies on historical data, and there is also limited use of non-financial information to justify the financial resources required by the different sectors, including health. The National Treasury could enhance its role by incorporating the use of non-financial information when compiling the national budget.

5. Commission of Revenue Allocation (CRA)

CRA's core constitutional mandate is to recommend the basis for equitable revenue and resource sharing. However, CRA does not use outcome or output indicators to inform the revenue-sharing formula. CRA could enhance its mandate by using data on county performance to recommend horizontal revenue-sharing allocations across counties.

6. The Intergovernmental Relations Technical Committee (IGRTC)

IGRTC acts as the link between county and national government. IGRTC facilitates cooperation and consultations between the two levels of government, including on matters relating to accountability within government.

7. The Ministry of Health (MOH)

MOH is responsible for managing and holding level 6 health facilities accountable for health resources expenditures and outcomes. The Ministry is also responsible for developing and championing the enactment of health policies and reforms to improve health outcomes and accountability.

8. County Assembly

The County Assembly approves budget estimates, which include health allocations, and receives reports on the county's performance. Each county establishes a County Assembly Health Committee responsible for addressing different health matters, including healthcare delivery. These health committees can enhance their accountability role by assessing the county's health outcomes against the allocated and utilized resources.

9. Health Facility Management Committees

These committees are responsible for assessing facility needs to inform budget estimates and reviewing expenditures. To improve accountability at the health facility level, the Ministry of Health could empower these committees by providing them with the necessary data to hold health facilities accountable. Empowering these committees as watchdogs could improve accountability at the grassroots level.

10. County Finance and Health Departments

The County finance department is responsible for budget preparation and prudent financial management across all sectors, including health, while the health department handles health planning, budget estimation, and overseeing county health system operations. Data-driven decision-making by these departments could enhance health outcomes by prioritizing funding for impactful health programs.

11. Citizens and Civil Society Organizations (CSOs)

CSOs facilitate civic engagements and empower citizens to promote advocacy for the delivery of quality services and prudent utilization of public resources. However, challenges persist in empowering the public with accurate and comprehensive data to effectively hold leaders accountable for optimal health delivery. Relevant CSOs should continue with civic education to promote public participation in accountability matters.

12. Development partners

Development partners such as USAID, UNICEF, and the World Bank play a critical role in enhancing healthcare delivery. They have established streamlined reporting and accountability processes that government actors can learn from, especially regarding attaching budget support to specific outcomes.

13. Social Health Authority

The Social Health Authority (SHA) is established under section 25 of the Social Health Insurance Act and is utilized to pool all contributions made under the Act. SHA is designed to provide healthcare services from impanelled and contracted healthcare providers and healthcare facilities on referral from primary health facilities. It replaces the National Health Insurance Fund and will play a key role in financial accountability as it will pay providers for healthcare services. This also involves accountability for quality of care and other standards (assurance purposes).

Overall, our findings point to a convoluted accountability system, with several actors playing the accountability role. This multi-actor nature of accountability in the health sector calls for better coordination and alignment for optimal fiscal and performance outcomes. However, the current coordination efforts are deficient due to the absence of an institutionalized forum or mechanism for information sharing among the actors and between the two levels of government. **This highlights the critical need for coordination among institutions with the accountability mandate to effectively fulfill their mandates,** as one respondent aptly pointed out:

> We can never have one overall institution that oversees everything. The Constitution was meant to decentralize everything. The aim of governance is not to unify oversight.
>
> ... If every entity was to do its bit effectively, it would fit the puzzle of accountability.
>
> National level respondent

Box 1

Recommendation: Strengthen coordination among oversight actors

It is imperative to foster ollaboration among oversight institutions to ensure a cohesive accountability framework. Implementing a continuous and standardized approach to information and feedback sharing could improve coordination. Strengthening cross-sectoral programming forums to leverage transferable lessons to ensure health policymakers, public budget officials, health providers, and external partners engage at each step of the PFM process, e.g., inter-governmental/sectoral working groups convened by the Council of Governors and includes the Ministry of Health, National Treasury and representation from the counties. This would enhance information sharing and collaboration on initiatives for improving accountability and healthcare delivery. Ultimately, strengthened coordination spanning national, county, and facility levels would streamline data flow processes and optimize health data utilization for informed health decision-making and accountability measures.

3. Health sector information flow and accountability structures

This section describes how health financial and non-financial information flows between the county and national government, the key stakeholders involved in the process, the systems used, and existing structures that promote or hinder accountability. We start by mapping the data flow process and the accountability levers by categorizing the accountability structures within the information flow process into four: 1) the flow process itself, 2) health policies, reporting and monitoring frameworks, 3) designated actors with the accountability mandate, 4) information systems.

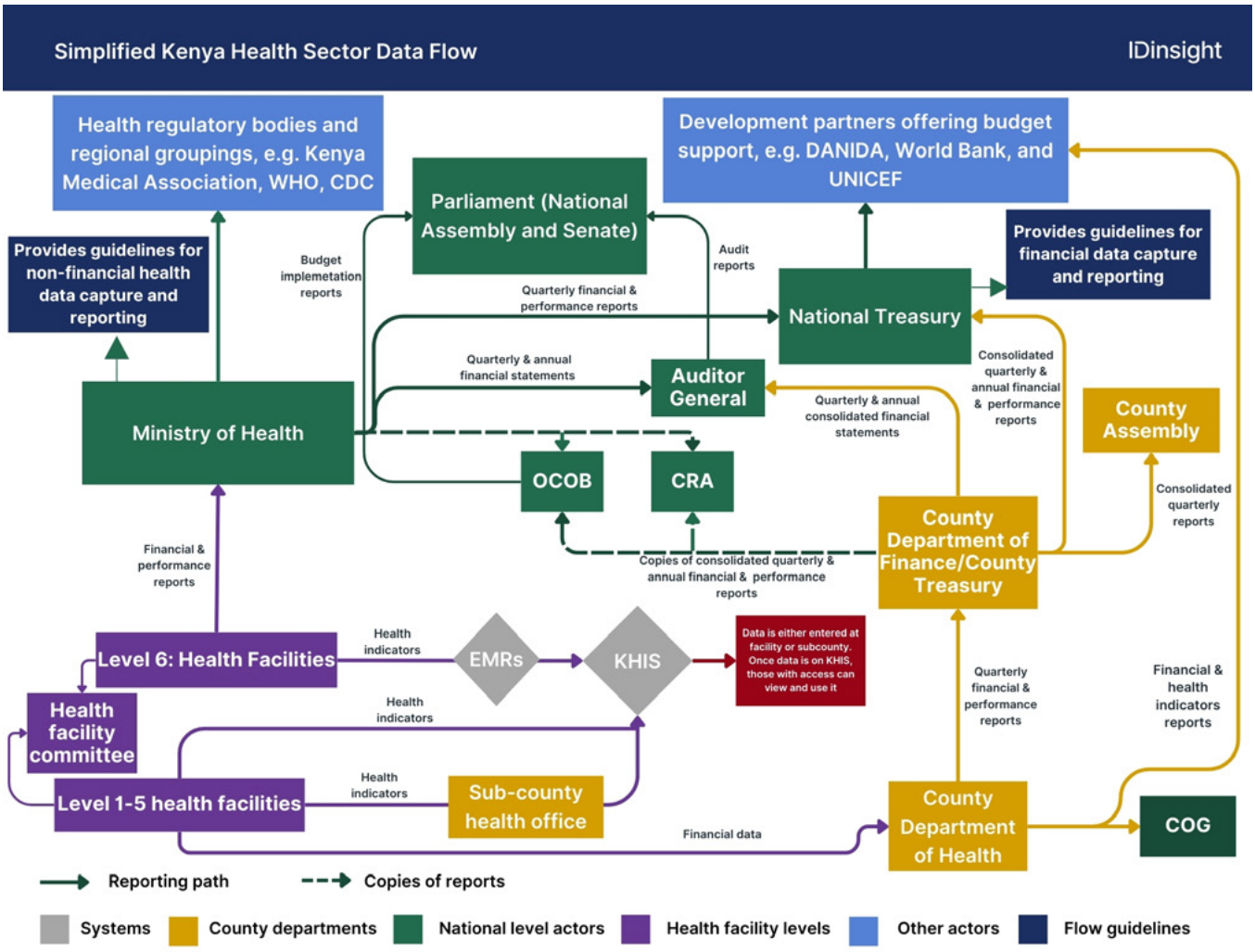
3.1. Health information flow process

Information flow involves a coordinated effort across a hierarchy of distinct yet interlinked actors and roles. Overall, financial and non-financial information is captured at the health facility level using a range of systems and is shared with various stakeholders, some of whom are responsible for overseeing the utilization of the health budget. In theory, health facilities should report resource utilization to higher authorities to improve health programming and ensure accountability. However, the current information flow and accountability process primarily capture financial information with little to no integration with non-financial health information (activities, service outputs, and outcomes). This gap inevitably denies the health system the benefits of enhanced accountability—both as an end in itself and as a means of improving health services from the resultant effectiveness in the use of public health funds (Atela et al., 2015; Goryakin et al., 2017; Molyneux et al., 2012).

The current process ensures data is captured at the points of service delivery and submitted to the next actor/system, as shown in the map. The frequency and timelines for reporting are also predefined. For instance, health facilities are required to report to the Sub County Health Records Office or enter data into KHIS by the 5th of every month. Counties submit quarterly and annual reports to different actors at the national level. The Office of the Controller of Budget (OCOB) produces quarterly budget implementation reports to monitor the utilization of resources. Audits by the Office of the Auditor General (OAG) are done annually. Providing set timelines is one way to ensure actors at the county and national levels are collecting and reporting data as expected. Reports, such as the budget implementation report, provide for continuous monitoring of disbursements and actual expenditures. This presents opportunities to hold duty bearers accountable on an ongoing basis and course-correct where necessary.

Figure 1 summarizes the financial and non-financial information flow in the health sector, the financial and performance accountability structures and mechanisms for supporting the prudent use of health system resources to meet health sector goals. The map shows how financial and non-financial information should be captured, the systems used, and the actors involved.

Figure 1: Simplified Kenya health sector financial and non-financial information flow map with points of accountability



While integrated information flow is key in ensuring accountability in the health sector, challenges such as the lack of formal incentives or sanctions for failing to adhere to the defined flow process persist. A County respondent told us that:

> There are no repercussions for non-compliance with reporting or delays. We only follow up and ensure [facilities] are reporting as expected and encourage them to report on time.
>
> ***County-level respondent***

The non-adherence to stipulated reporting guidelines could be addressed by institutionalizing a formal incentive system that recognizes and rewards facilities and health workers to encourage adherence. Incentives (including sanctions) have been shown to enhance accountability in similar contexts (Atela, 2013; Brinkerhoff, 2004; Hepworth et al., 2022). Strategies such as using information systems to track how inputs are converted into outputs, implementing performance incentives to reward excellence, and enforcing sanctions for underperformance can bolster accountability.

3.2. Health policies, reporting, and monitoring frameworks

Kenya has various policies, legal and monitoring frameworks, and structures to support accountability in service delivery at both national and county levels. In their review of in-country accountability in the Kenya health system, Atela and Wafula (2015) provide a detailed map of mechanisms operating at the decentralized units as well as the national level. Their study distinguishes between institutional-driven mechanisms and organic social accountability mechanisms driven largely by community groups and networks. They also differentiate between temporal/episodic and time-bound accountability mechanisms, 'merely existing to address a specific issue or set of issues' and the permanent and more embedded mechanisms anchored in the legal, policy, and operational frameworks (ibid). In this section, we build on this framing by describing data-focused structures, highlighting key gaps, and providing some resolutions.

3.2.1. Policies and Legal Frameworks

The Constitution of Kenya (GoK, 2010) emphasizes accountability in the health sector through several key provisions. Article 43 of the Constitution guarantees every person the right to the highest attainable standard of health, establishing a legal expectation for the provision of quality health services and setting a foundation for accountability. Further, the fourth schedule of the Constitution delineates the functions between the national and county governments, assigning counties the primary responsibility for delivering health services. Devolution aimed to improve service delivery and accountability at the local level.

Additionally, Articles 10 and 232 further mandate transparency, accountability, and public participation in governance. These principles are intended to be integrated into the operations of all public institutions, including those in the health sector, ensuring that health services are delivered efficiently and that public resources are used responsibly (MoH, 2014). Further, the Kenya Public Finance Management Act (GoK, 2012) enacted in 2012 regulates and provides for the effective management of public resources across the two levels of government. The act outlines the processes of budgeting, requisitioning, and reporting on financial resources. The act also provides the legal ground for the establishment of key institutions responsible for managing and controlling public funds, including the National Treasury, parliamentary committees, and independent oversight institutions such as the OAG and the OCOB. These institutions are empowered by law to enforce guidelines and structures across various sectors, including health. Given the sensitivity of accountability, respondents emphasized the importance of clear legal frameworks to guide county and national government operations. A key informant stated that:

> … Outside the health sector, there is a governance framework grounded in the Constitution and global human rights framework. The Kenyan Constitution is one of the most progressive constitutions globally. Within it, there is a tool, if we look keenly enough, that would enable us to make people accountable. …The Constitution also anticipated a situation where the watchdog may be compromised, so several institutions are supposed to guard against each other crossing certain boundaries. In anticipation of this, Parliament has given additional safeguard measures to different constitutional offices. So, there is an independent Office of the Auditor General, Office for Commissioner of Revenue Allocation, the Office of the Commissioner for Administrative Justice, etc.
>
> ***County level respondent***

Despite the existing legal frameworks cushioning the right to health for all citizens, the state's obligations are not sufficiently clarified or operationalized into public health measures at both national and county levels (ICJ Kenya, 2023). The existing framework under national and international laws and policies is, therefore, inadequate to address the systemic and structural barriers to accessing health services. To address these shortcomings, it is essential to enhance legislative and policy reforms that strengthen the right to health. Additionally, strengthening institutional and regulatory frameworks for information generation and sharing across actors at the national and county levels would significantly improve accountability efforts in health.

3.2.2. Reporting and Monitoring Frameworks

Various frameworks support the monitoring, evaluation, accountability, and learning for financial and non-financial resources across national and county governments. For instance, the Public Sector Accounting Standards Board (PSASB) develops standardized guidelines and templates, including the content and the reporting frequency for financial reporting. The objective is to ensure systematic reporting and to facilitate intra-institutional accountability and learning. The Ministry of Health (MOH) also provides guidelines, manuals, daily activity registers, and program-specific forms for reporting non-financial data in health facilities. The frameworks capture critical non-financial indicators such as patient biodata, diagnoses, and treatments, which the Ministry and other health stakeholders can use to develop health trends and evaluate the quality of care provided at the facilities.

Similarly, the government has various monitoring frameworks in the health sector that enable the use of financial and non-financial data to enhance accountability. The frameworks include sector reports, county development plans, auditing processes, and health facilities review meetings. For instance, the Medium-Term Expenditure Framework (MTEF) report, produced every three years, is a key tool that analyzes the health sector's performance and achievements, considering both financial and non-financial output data. Preparation of the MTEF report necessitates the relevant health stakeholders to review resource allocation against health delivery expenditure and performance targets. Ideally, the findings from this exercise inform priorities and budget ceilings for the subsequent three years.

Even though the frameworks described here are supposed to enable health system actors to institutionalize and systematize data integration for decision-making and enhanced accountability, evidence suggests limited, ad hoc use due to various challenges.

The first and major challenge is the absence of a definitive framework for capturing non-financial outcome indicators, limiting the usage of the data for decision-making and ultimately hindering effective service delivery. Currently, data collection is mainly output-focused. The Kenya Health Information System (KHIS) data and indicators listed in the indicator manual, Kenya's primary health data management platform, are heavily output-based. Because the output data is not always linked to service delivery indicators, it lacks sufficiency in accounting for allocated resources against delivered services. This output-focused gap is particularly critical given Kenya's program-based budgeting, which relies on outcome data (IBP, 2014). Reflecting on this challenge, one respondent noted that:

> For non-financial data, we do not have any guidelines that state what we should report and how. However, as an institution, we have our own templates for what we report, and there is no regulatory framework for what we report on. We decide on what non-financial data template to use, which varies yearly.
>
> ***National level respondent***

The second and related challenge is the fact that sector reporting and monitoring frameworks offer no guidance on how to **integrate financial and non-financial information. Stakeholders are thus left to blindly navigate the minefield of data integration, often turning to manual approaches.** For example, Nakuru County creates dashboards bringing together the two sets of information. When describing how the dashboards improved the utilization of health data in the county, one respondent reported:

> We have created dashboards for [financial and non-financial] data. People have not been getting this data before, and if the data is not consumable, then it is not useful. We have a partner that came for monitoring and evaluation support. We worked with them and came up with a google sheet summarizing quality health data. We needed to make it consumable through a one-page dashboard and it worked wonders. Within a few minutes, you could look at it and make decisions.
>
> ***County level respondent***

Respondents also reported that much of the sector focuses on financial information pertaining to allocated budgets, disbursements, and expenditures, with little to no linkage to non-financial data. The absence of data integration guidelines also means that much of the reporting requirements primarily emphasize financials. These findings confirm reports by a recent survey of health sector budget transparency in Kenya that revealed a significant disparity in the information provided at the programme and sub-programme levels in county health budgets (Houghton & Ndanu, 2024). Counties offer more financial than non-financial information. Regarding the availability of financial information on health sector expenditures, 34 counties scored an average of 87 out of 100 points (ibid). However, this score dropped to 60 when assessing the intended outcomes of these expenditures at the programme and sub-programme levels. Furthermore, 6 out of the 34 counties did not publish any non-financial functional information in their health budgets (ibid). This disparity between financial and non-financial information complicates the ability to effectively link county allocations to specific programmes and sub-programmes and, eventually, to outcomes. Moreover, oversight institutions do not always assess the alignment between resource allocation intentions and actual expenditures, a well-recognized gap as highlighted by a key informant:

> There is a big gap between resource requisition and utilization, which impacts actual service delivery. A county can requisition medical supplies but reallocate the resources for other purposes, such as buying vehicles.
>
> ***National level respondent***

Despite these challenges, our findings suggest there is an opportunity to strengthen accountability in the health sector by building on the frameworks, such as the MTEF, along with other relevant reports and plans described in Appendix 1. Oversight institutions can use these data points to further interrogate the resources spent on health services against the resulting health outcomes. **Institutionalizing the process of integrating financial and non-financial information could greatly enhance fiscal and performance accountability in the sector.**

Box 2

Recommendations

1. **Develop a clear framework to guide health stakeholders in collecting and utilizing non-financial health data.**

In line with the Primary Health Care Act, the Primary Care Networks (PCN) will need to make deliberate efforts to shift from 'input-based budgeting' to 'strategic purchasing'. This is aimed at increasing the efficiency of health spending, calling for determining which services the PCNs should buy, from who, and at what cost, with the aim of maximizing health system performance. National and county governments could develop a comprehensive framework to guide health stakeholders across different levels on the collection and utilization of non-financial health data for strategic purchasing. Complete financial and non-financial data could enable the government to cost health services delivery and establish a results-based and incentive-driven provider remuneration mechanism leading to sufficient allocations to interventions with the greatest impact on health outcomes. The government, through relevant institutions such as PSASB and MOH, could develop non-financial reporting guidelines and standardized templates. These guidelines could include the outcome data to be captured, the frequency, the actors mandated to collect the data, and how it should be integrated with the financial statements. These guidelines should be developed in collaboration with stakeholders from the health sector, including government agencies, healthcare providers, and oversight institutions.

2. **Accelerate efforts by the National Treasury to integrate financial and non-financial for budget prioritization and reporting.**

The National Treasury Budget Department (BD) is mandated to prepare annual estimates of revenues and expenditures that are laid before Parliament for approval every year. It also prepares supplementary estimates as needed. BD is currently planning to review, refine, and validate the non-financial indicators used in budget preparation and reporting to ensure that the key non-financial indicators are integrated into the budgeting and reporting process. This involves revising the Standard Chart of Accounts (SCOA), which provides the coding structure by which budgets and government financial transactions are coded for recording in IFMIS Hyperion.[2] This will facilitate the capture, storage, and reporting of integrated financial and non-financial information for expenditure and performance tracking consistently across all 83 MDAs and counties, thus strengthening accountability.

2 Hyperion is a budgeting system linked to IFMIS that is used to capture and manage the budget, as well as generate specific reports. Before integrating Hyperion, the budget system was standalone and not connected to other PFM systems like Ledger and procurement. The re-engineered Hyperion budget module offers an integrated solution.

3.3. Information systems

The health system in Kenya utilizes various health and hospital management information systems (HMIS) to facilitate the collection, storage, processing, visualization, and retrieval of various types of data related to patient care, administrative tasks, financial transactions, and clinical and operational activities. These systems promote or hinder accountability in various ways, as discussed below.

3.3.1. The Kenya Health Information System (KHIS)

The central platform for the aggregation and reporting of health data in Kenya is the KHIS, managed by the Ministry of Health. Access to KHIS is role-dependent, ensuring that county and national-level stakeholders can retrieve and utilize data appropriate to their functions within the health information framework. This system in itself is an accountability mechanism as it defines the type of data that should be captured and the format it should be inputted into the system. This central system also limits data quality issues as compared to if key stakeholders such as MOH were to depend on manual reports from the health sector to inform programmatic decisions. Despite the core place of this system in health reporting, challenges exist, such as frequent downtimes, key actors not having access to the system and a lack of a clear framework on how data should be processed and utilized once in the system. As indicated in the flow map (Figure 1), once the data is inputted into KHIS, it is expected that actors with logins will access the system and use the data accordingly. Additionally, there is no legal framework to make reporting mandatory and to ensure interoperability of other health systems with KHIS. **The use of this system to improve accountability could be enhanced by ensuring all key stakeholders have access to the system and it is integrated with other key systems, such as the Integrated Financial Management Information System (IFMIS), the main system used for budgeting and financial reporting for all sectors. This way, health actors would have complete financial and non-financial information for health planning and hold the relevant facilities accountable for target health outcomes as per allocated resources.**

3.3.2. Other electronic health systems

In addition to KHIS, respondents described other electronic systems that they use, including TIBU, which captures TB case-based data; KenyaEMR, for capturing HIV data; and eCHIS, used by Community Health Promoters, among other Electronic Medical Records (EMR) systems. Some hospitals have also deployed or developed customized electronic systems that they use to capture data. For example, the Kenyatta National Hospital reported that they have an e-hospital platform that they mainly use to capture clinical data; Trans-Nzoia County is using a system called Medboss and another called Dorma to capture outpatient registration data; Nakuru County reported to be using the Elephant and AfyaKE systems. **Respondents emphasized the critical role of digital systems in addressing the data quality challenges resulting from manual data collection and storage. Having data in these systems also makes it easier for actors to access most of the facility-level health information in one place, improving processes such as accountability at the facility level.** Table 8 in Appendix 4 details some of the national health information systems that different respondents described during the key informant interviews.

3.5.3. Manual reporting health tools

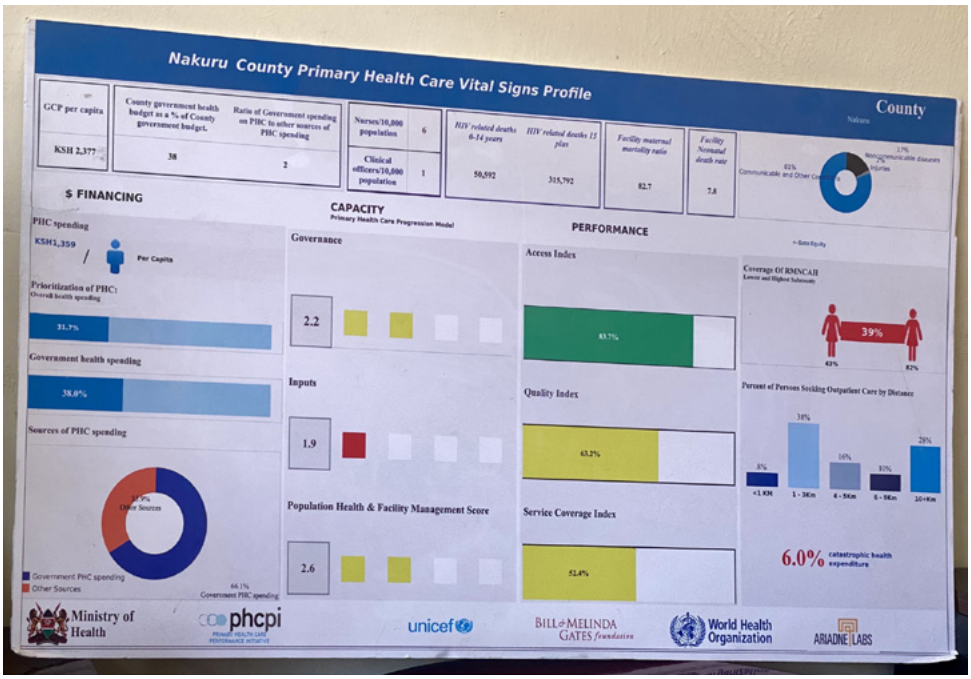
Besides electronic systems, manual reporting tools are still widely used in many health facilities. According to findings from the Kenya Health Facility Census (MoH, 2023), approximately one-third of the 14,883 surveyed facilities had implemented an Electronic Health Information System (EHIS) at the time of assessment. Among these, 62% featured an integrated or end-to-end system, while the remaining 38% utilized program service-specific EHIS.

The MOH Health Informatics Division creates and revises templates for manual registers and forms used to record health data before entering the data into electronic systems. These records serve as the primary data collection tools at the point of service delivery. For instance, health facilities have daily activity registers used to capture services offered at the facility level. The data in the registers is summarized at the end of the week or month and entered into KHIS.

In many cases, data analysis skills are required when existing systems need more critical analysis and visualization features. For instance, Nakuru County utilizes dashboards as a visualization and tracking tool for the collected data (an example is illustrated in Figure 2). The visualization tool facilitates an insightful understanding of the data, upon which high-level meetings with the county health and finance committee determine whether set targets are met and align on subsequent decisions.

Some national-level stakeholders, such as the Office of the Controller of Budget (OCOB) and the Council of Governors (COG), also reported primarily using Excel and Word applications for data collection and compilation. The COG health committee uses the compiled county data to inform actions related to health sector matters. The OCOB uses the data to inform its mandate of budget implementation oversight. **The government could expedite the transition from manual tools to digital systems to ensure the use of high-quality data in informing health sector decisions and holding stakeholders accountable for health delivery.**

Figure 2: Example of one of the Nakuru Primary Health Care tracking dashboards



3.3.4. The Integrated Financial Management Information System (IFMIS)

The National Treasury uses IFMIS for budgeting and managing financial reporting across all sectors, including health. Counties and MDAs, including MOH, are required to submit financial reports directly through IFMIS. The County Departments of Finance consolidate all county financial data and submit them through IFMIS. However, in some cases, counties still rely heavily on manual reporting using financial reporting templates provided by the National Treasury through PSASB. The OCOB and OAG also use data from IFMIS for their functions, although in some cases, access to IFMIS is limited.

3.3.5. Challenges within health and financial systems

While the existing systems capture the necessary information for accountability measures in the health sector, several challenges persist.

Limited health and financial systems interoperability

Currently, no system integrates financial and non-financial information. Oversight institutions have limited access to existing health and financial systems, and even when access is granted, comparing data between the two is cumbersome. This lack of interoperability makes it difficult to view and analyze both sets of information simultaneously, hindering informed decision-making.

The respondents identified limited interoperability of health and financial information systems as the main bottleneck hindering health data integration and, consequently, impacting accountability processes. In their study on digital health systems in Kenyan public hospitals, Muinga et al. (2020) discovered that all their surveyed facilities had implemented digital health systems primarily for administrative tasks. The study found that most of the systems were frequently standalone solutions, and there were differing levels of interoperability among facilities that utilized multiple systems. This challenge persists at the national level as the main financial and non-financial systems are not interoperable. When reflecting on this challenge, one respondent stated:

> IFMIS lacks provision to capture actual non-financial performance. From where I sit, KHIS should be integrated into IFMIS and not the other way around. The KHIS is for tracking health targets, and it has been used by donors to track their funding. The National Treasury is working on a framework for collecting non-financial data, which would make it easy to integrate with financial data on IFMIS.
>
> ***National level respondent***

Varied and multiple Electronic Medical Record Systems across different counties and facilities

There are multiple Health Information Systems in use currently, and they often do not integrate smoothly with the central KHIS, creating additional steps for data officers to compile and transfer health indicators and hindering access to comprehensive health data for decision-making. The systems range from electronic medical records (EMR) to laboratory, billing, and administrative systems. The system's non-integration creates inefficiencies that obstruct a seamless data exchange and the utilization of different types of health data to inform health interventions, budgeting, and other key evidence-driven activities such as accountability.

Integrating health data systems would play a crucial role by connecting financial and non-financial data. **Government efforts, such as creating a unified health digital superhighway through the** Digital Health Act 2023 (GoK, 2023b), **are timely and will significantly address the health information systems integration challenges, facilitating the exchange of information across systems to inform health decisions and enhance accountability.** When describing government efforts to improve health data and systems integration, a national-level respondent reported:

> … the Government of Kenya is working on the superhighway system with a claim system, i.e., in the next six months, we should have an E-Claim system. The GoK is funding the architecture of this system as part of the Social Health Insurance and other components.
>
> ***National level respondent***

Box 3

Recommendation: Enhance health and financial information system interoperability

The Health Act 2017 (GoK, 2017) emphasizes the need for the standardization of health information exchange through an interoperability framework and the establishment and maintenance of a comprehensive integrated health information system. **Accurate, timely, and complete data are vital for health planning, policy development, monitoring, and evaluation to ensure prudent utilization of health resources and optimal health system functioning.** Achieving interoperability and data integration necessitates well-developed and integrated Health Information Systems. Therefore, government initiatives such as the Comprehensive Integrated Digital Health Information System, "digital health superhighway" and the Digital Health Act should be accelerated. The functions of the Digital Health Agency under section 6 of the Act include developing, operationalizing, and maintaining the comprehensive integrated health information system; promoting health data portability and health data exchange; facilitating collection and analysis of data to inform policy and research in the health sector, and supporting the development and implementation of standards for enhanced interoperability.

In addition, section 26 of the Digital Health Act establishes National Health Data banks for data storage and facilitating integration and interoperability of the national health data bank with other relevant databases. This presents an opportunity to achieve interoperability of the integrated health information system and the Integrated Financial Management Information System (IFMIS) for real-time data comparison and accountability processes.

Section 5 of this report provides some proposed solutions for addressing the health and financial systems challenges that were discussed in our findings.

4. Accountability Mechanisms in the Health and Education Sectors: A Comparative Analysis

This section provides a comparative analysis of the accountability structures within the education and health sectors, highlighting their respective information flow, reporting structures, and best practices that could inform future budgetary decisions. This analysis draws from IDinsight's collaboration with Expertise Global to review the information flow processes and pathways to accountability in the education sector.

4.1. Approach to the comparative analysis

The aim of the comparative analysis was to draw lessons and best practices from a comparator sector that could inform reforms in the health sector. We used the following criteria in selecting the comparator sector:

1. We prioritized sectors with a similar level of decentralization autonomy and decision-making power at the county level to health.
2. We analyzed the proportion of national and county budgets allocated to each sector for the fiscal year 2023-24 (PBO, 2023)and prioritized sectors with similar budget allocations and percentages of the national government budget. For the percentage share of the national government budget, see Figure 3 in appendix 5 (Parliamentary Budget Office, 2023).
3. We focused on observable outcomes and prioritized sectors that are part of IDinsight's focus areas. This allowed us to leverage existing contacts and relationships to enhance engagement.
4. We also considered the current government administration's priorities, identifying sectors highlighted in their manifesto.

Based on the above criteria, we found the education sector to be the most analogous to health out of the four shortlisted sectors (i.e., the Ministry of Education, the Ministry of Labor and Social Protection, the Ministry of Lands, Public Works, Housing, and Urban Development, and the Ministry of Public Service, Gender, and Affirmative Action). The health and education sectors share several fundamental similarities in accountability and information flow:

1. Both sectors involve complex service delivery systems requiring extensive coordination among various stakeholders, including government agencies, non-governmental organizations, and private sector entities.
2. They both have structured service delivery points that serve as critical data collection and collation hubs.
3. While the health sector is devolved and the education sector retains significant national oversight, both receive funding through national government allocations and locally generated revenue.
4. Both sectors have decentralized certain services to enhance accessibility and responsiveness to local needs: County Health Management Teams (CHMTs) manage primary and secondary healthcare facilities, and local education Boards of Management (BOMs) oversee school administration.

However, this comparison is not perfect: The health sector is, in theory, devolved, making data flows difficult to compare due to differences in data-sharing frameworks and data utilization points. Furthermore, schools generally have greater autonomy on school matters than health facilities, where autonomy and budgets vary by level and county.

4.2. Financial and Non-Financial Data Flow in the Health and Education Sector

4.2.1. Overall Data Flow

In general, the Public Finance Management Act, 2012 (GoK, 2012) outlines the budget process, which involves the timely preparation of key documents by Government Ministries, Departments, and Agencies (MDAs) for approval by the Cabinet and Parliament. This reporting requirement necessitates the submission of comparable financial and non-financial data across all MDAs during the three key phases of budgeting: preparation, implementation, and evaluation (Table 1). Adherence to the reporting standards ensures alignment with national fiscal policies and facilitates effective resource allocation and oversight across sectors.

Table 1: General data flows across Ministries are the same

Budget Phase	Budget phase description	Examples of Data required
Budget Preparation	It involves drafting and approving key documents by the Cabinet and Parliament, including integrated development planning, financial and economic policy determination, budget estimation, and the Budget Policy Statement/County Fiscal Strategy Paper. The budget calendar sets deadlines for these activities, with the budget to be finalized and submitted for approval by April 30th of each fiscal year. This allows the budget to be in place before the start of the new fiscal year on July 1st (The National Assembly Taskforce on Fact sheets, Speaker's Rulings and Guidelines, 2022).	*Non-financial:* Key progress indicators for the upcoming fiscal year; Input, output, and outcome targets for the year. *Financial:* Cost parameters per input target and on aggregate.
Budget Implementation	It involves implementing approved budget proposals overseen by the executive at both national and county levels. Parliamentary oversight at this stage includes quarterly evaluation, accounting, and reporting on budgeted revenues and expenditures for both levels of government. Key documents include quarterly budget implementation reviews by the Controller of Budget and reports from national and county governments (The National Assembly Taskforce on Fact sheets, Speaker's Rulings and Guidelines, 2022).	*Non-financial:* Procured inputs; Maintenance and operations inputs. *Financial:* Expenditure reports based on procured inputs

Budget Evaluation	The Auditor-General audits national and county government finances to ensure prudent spending. The audit reports are submitted to the Public Accounts Committee for review and preparation of report and recommendations for discussion by the full House. Reports are debated in Parliament or county assemblies within three months, followed by actions.	*Non-Financial:* Achievement of input and output targets for the year *Financial:* Audit report on efficiency and effectiveness of expenditure

However, it is important to note that while overarching reporting guidelines apply across all sectors in Kenya, the specific way each sector reports is influenced by its distinct characteristics, regulatory environment, stakeholder expectations, challenges, and data management practices. Furthermore, devolution has significantly influenced how data is collected, analyzed, and utilized, as well as the stakeholders involved in this process. This variation has implications for the quality and consistency of financial and non-financial data, shaping the interaction and flow of information within and between sectors.

That noted, **both the health sector and education sector have a highly distributed service delivery structure through which financial and non-financial information flows. Information originates from decentralized sources** such as health facilities and schools, aggregated at county levels, including county health departments and county education offices, and culminates with national reports and audits involving the MoH, MoE, National Treasury, OCOB, Parliament, and the OAG.

In the health sector, data originates from health facilities, moves through county health departments, and reaches national institutions. Reports encompass health facility statistics, financial records such as budget allocation expenditures, and specific program data such as immunization coverage. Similarly, in the education sector, data primarily starts at schools, except for Early Childhood Development and Education (ECDE) and Technical and Vocational Education and Training (TVET) data, where reporting is done by county education offices to the MoE. Reports include school enrolment figures, academic performance summaries, financial data (budget requests, expenditures), and program-specific details such as curriculum development and teacher deployment.

A significant difference between the two sectors is the ability to track data at individual levels. The education sector tracks students individually, facilitating the monitoring of transition rates between primary, secondary, and tertiary levels. This contrasts with the health sector, where patient-level tracking is more challenging, especially during referrals between facilities. Lack of data on lost-to-follow-up has been shown to hinder the health system's ability to guide and improve program performance reporting and inform strategies to achieve high rates of long-term retention in care (MoH, 2013; Rachlis et al., 2015; Samba et al., 2022). **Additionally, evaluating educational outcomes is more streamlined through standardized government exams, which provide clearer performance metrics for schools compared to health facilities.**

4.2.2. Data Systems

The health and education sectors rely heavily on information systems to collect and aggregate data.

In the health sector, facilities utilize the Kenya Health Information System (KHIS) along with various Electronic Medical Records (EMRs) to monitor a wide range of health indicators. These systems track patient records, disease prevalence, healthcare services utilization, and treatment outcomes across different health facilities. Conversely, the education sector utilizes the National Education Management Information System (NEMIS) to gather student-level information. NEMIS collects student-level information such as enrolment details, contact information, and academic performance. It also captures school infrastructure data, including facilities, learning materials, and teacher demographics categorized by school. Additionally, NEMIS manages cost parameters related to education expenditure and provides locational information on educational institutions. Both sectors also utilize IFMIS for financial management at both county and ministry levels. This system helps in budgeting, expenditure tracking, and financial reporting.

Access to the KHIS and NEMIS systems is primarily limited to stakeholders within the health and education sectors, respectively, excluding other national-level oversight institutions. The KHIS and NEMIS are not linked to IFMIS, and their current technology architecture is closed and siloed, making it difficult for the systems to exchange data with IFMIS. A recent review showed that unsustainable funding and delivery models dependent on donors, legacy technologies, and poor data governance contribute to this siloed architecture, limiting interoperability and hindering seamless data exchange between the different systems (Long et al., 2023). The rigidity of the current data systems, coupled with legacy technologies, reduces their policy relevance and adaptability to the evolving user, policy-maker, and citizen needs. Key differences are evident in how non-financial systems facilitate data collection, analysis, and aggregation. The table below outlines these differences:

Table 2: Comparison of data collection, analysis, and aggregation systems between health and education sectors

Aspect	Health	Education
Data collection	Data aggregation to the county level is complex and time-consuming due to diverse health facility frameworks. Some facilities collect and document data manually while others enter it directly into the system.	Efficient data collection is facilitated by unified systems and structures despite the numerous schools in each county.
	Different counties use different EMRs and frameworks, complicating national data reconciliation.	Uniform data collection mechanisms using one system simplify data collation and reconciliation nationally.
Data Analysis	Large volumes of health facility data may contain unidentified errors, impacting analysis outcomes.	School data may contain errors but are rectifiable under a unified framework.
Data aggregation	Data on KHIS and EMRs is primarily aggregated at county levels, easing harmonization but posing challenges for national-level analysis.	Data is harmonized nationwide, facilitating easier analysis under national frameworks.

4.2.3. Data Integration and Utilization

Overall, both sectors have limited data integration and little to no analysis of outcomes against allocated resources. In addition, nationally, sectors have multiple systems that have limited interoperability, thus restricting the ability to link financial and non-financial data. Further, little coordination exists between oversight national institutions and ministries, as well as between finance and sectoral departments in the counties.

The health sector faces more pronounced challenges due to its decentralized nature and diverse stakeholder interests. In contrast, the education sector benefits from a more structured cost estimation and funding approach. The ability to exchange timely and high-quality information across and between different layers of government provides school managers with the means to make informed operational decisions. It also reduces friction in the PFM system by allowing resources to flow in a timely, predictable, and accountable manner. In addition, funding allocation in the education sector is based on capitation, whereby allocation of funds to schools is based on a 'per student basis'. The amount allocated per student can vary based on factors such as the level of education (primary or secondary), location (urban or rural), and specific needs of the school. Capitation aims to ensure equitable resource distribution and support free primary and secondary education. Capitation, though not perfect, forms a good basis for linking financial and non-financial data, providing a solid framework for costing education. Nonetheless, we did not find evidence that the data is used for this purpose, and discussions with senior education officials suggest limited capacity for integrating both sets of data at the point of resource allocation decision-making. On the other hand, funding in the health sector is largely intuitive, with no standard costing structure or guideline.

4.2.4. Accountability and Oversight

While both the health and education sectors in Kenya adhere to similar accountability frameworks, they differ significantly in stakeholder dynamics and implementation structures.

In the health sector, accountability primarily flows through health facility management committees, which are responsible for assessing facility needs and reviewing expenditures to inform budget estimates. However, these committees often face challenges in accessing and appraising the necessary data for informed decision-making to guide budget decisions and to hold facilities accountable for resource use. At the national level, oversight is centralized under the Ministry of Health (MoH), which collects data from county health departments, consolidates national health indicators, and prepares reports for entities such as the National Treasury, Parliament, and international health organizations.

Conversely, the education sector boasts a more structured accountability framework with decentralized stakeholder roles. School heads are answerable to Boards of Management (BOMs), which are pivotal in approving budgets at the start of each academic year. BOMs consider factors such as student enrolment, school performance metrics, infrastructure needs, and teacher evaluations when assessing overall school performance. This data-driven approach empowers BOMs to utilize key performance indicators in their decision-making processes. Moreover, the education sector's budgeting process is rigorously defined compared to the health sector, ensuring uniformity across schools. BOMs are accountable to the Ministry of Education for financial disbursements and to stakeholders, particularly parents, for academic outcomes. Additional oversight is provided through audits conducted by the Directorate of School Audits.

Moreover, the Teachers Service Commission (TSC) is pivotal in ensuring teacher accountability within the education sector, overseeing crucial aspects such as recruitment, deployment, and professional conduct. In contrast, the health sector has encountered significant hurdles in human resource management, which has been highlighted by the recent establishment of the Kenya Health Human Resource Advisory Council (KHHRAC) within the last two years. Coordinating health human resources across county and national levels is much more complex due to the sector's diverse stakeholder interests and priorities.

Overall, both sectors benefit from oversight by entities such as the Office of the Controller of Budget (OCOB) and the Office of the Auditor General (OAG), which ensure compliance with financial management regulations and assess operational performance through fund allocation oversight and audit evaluations.

Box 4

Practices in the education sector that could be applicable to the health sector

Empowering decentralized levels of accountability

The Basic Education Act 2013 (GoK, 2013) mandates that the School Boards of Management receive, collect, and account for any funds accruing to the institution. They have an oversight, monitoring, and evaluation role in the implementation of government-funded projects by guidelines set by the MOE. BOM members undergo training to enhance their ability to manage and provide oversight in educational institutions. They are trained by the Kenya Education Management Institute (KEMI) on topics such as the Legal and Policy Framework of Education, Corporate Governance in Education, Public Procurement, and Financial Management (KEMI, 2023). This could be applicable to the health sector by offering capacity strengthening to the Health Facility Committees (HFCs). Health Sector Services Fund (HSSF) funds are managed by a Health Facility Committee (HFC) that includes community members from the facility catchment area. In a past study, Waweru et al. (2013) found that inadequate training of HFMCs led to negative implications for HFC functioning. This hindered their ability to take on broader roles such as budget management. **To empower decentralized levels of accountability, greater emphasis is needed on financial management training for HFCs to manage their budgets effectively and meet their allocated roles.**

Costing health services and funding it through a well-defined per-patient basis

In the education sector, capitation funding is linked to a well-defined per-student basis based on enrolment data submitted by schools. This ensures equitable resource distribution and support for free primary and secondary education. These funds cover essential expenses such as teaching materials, examination fees, and school maintenance. Such a model that would improve a patient's health outcomes relative to the cost of care is an aspiration embraced by stakeholders across the healthcare systems, as highlighted in the Primary Health Care Network Guidelines (MoH, 2021).

This calls for determining which services the Primary Care Networks (PCNs) should buy, from who, and at what cost with the aim of maximizing health system

performance. The PCNs will need to take advantage of the NHIF(now Social Health Insurance Fund) provider payment methods—e.g., capitation for outpatient services and case-based and fee-for-service payments-- and the new rates for the new outpatient and specialized benefit packages to maximize the respective claims (MoH, 2021). These would resemble the remuneration of a General Practitioner in Denmark - a mixture of capitation, which makes up about one-third of the total income, and fee-for-service payments, as well as extra fees for out-of-hours consultations, telephone consultations, and home visits (Kringos et al., 2015). Each physician has an enrolled patient population of about 1,500 and offers integrated, comprehensive care and smooth information transfer across a fixed/ virtual team of providers, including physicians, advanced practice nurses, nurses, and others, as needed, eliminating the duplication of information (Davis et al., 2005).

Integrated health and education information systems that track data at the individual level

Over the years, advancements in data integration have been a priority given the growing demand for information (by educational and health centers, decision-makers, public and international organizations, and civil society) (Cooper-Craig et al., 2022). Data integration enables the construction of a more global view, providing decision-makers with the most complete evidence possible. Having a unique identifier associated with each student, which functions as an ID or key, enables intersectoral integration at the student level.

The gathering and identification of information from each student is a facilitating condition for the integration and exchange of educational and health information at learning institutions and health facilities. Students are registered based on their vital statistics - a practice the health sector can easily adopt. However, policymakers miss opportunities to integrate health into education policy and practice, and vice versa, as health and education have distinct accountability measures and pressures to achieve short-term gains, making it challenging to take a more integrated, long-term approach (Lawrence et al., 2016). This would require a nationwide health and education research agenda that would convene research entities and other organizations to support research that better articulates (1) priority education and health outcomes that such collaborative partnerships could be expected to achieve; (2) means to monitor those outcomes; and (3) means such partnerships might employ an integrated education and health information system to account for better education and health outcomes.

Creating a decentralized audit function for health

The Basic Education Act 2013 (GoK, 2013) provides the Cabinet Secretary of Education with the provision to establish mechanisms for school-based auditing. The Directorate of Schools Audit (DSA) under the State Department of Basic Education was established with the capacity to deliver the audit of over 11,000 secondary schools in the country. However, audits in the health sector solely rely on the OAG, which does not provide sufficient coverage of all health facilities. Previously, the County Government Health Executive accounted for Level 4 and Level 5 hospitals as a single line within the IPSAS cash template. This reporting framework under IPSAS Cash did not adequately disclose financial information relevant to decision-making by

the various users of financial information.

In May 2022, the Public Sector Accounting Standards Board (PSASB) prescribed the International Public Sector Accounting (Accrual Basis) for application by all Level 4 and Level 5 hospitals (General, 2022). The IPSAS Accrual reporting framework provides a linkage between financial and non-financial information in level 4 and 5 hospitals. This will enhance understandability by users on how funds received by hospitals are used to ensure the objectives set are met (PSASB, 2022). We recommend replicating this framework in Level 1-3 hospitals. **In addition, establishing a Directorate of Health Facility Audit, akin to the Directorate of Schools Audit, could strengthen accountability mechanisms.**

Empowering KHHRAC for human resource coordination

In the education sector, The TSC is responsible for registering all trained teachers before they can legally teach in Kenya and maintains the registry of registered teachers. This centralized registry ensures a single authoritative source of information on the teaching workforce.

The commission holds teachers accountable and has the power to track teacher performance and institute disciplinary measures. This is a strong accountability mechanism to ensure teachers uphold the highest standards of professionalism. Similar to TSC, the Kenya Health Human Resource Advisory Council (KHHRAC) was established under the Health Act of 2017 (GoK, 2017) to fill a crucial gap in Human Resources for Health (HRH) coordination.

The Council is set to review policy and establish uniform standards for the maintenance of a master register for all health practitioners in the counties. This will enable health sector stakeholders, such as the government and health facilities, to access information and hold the KHHRAC accountable for its oversight of the health workforce. Empowering KHHRAC with lessons from TSC's oversight practices could enhance HRH management in Kenya.

5. Conclusions and Recommendations

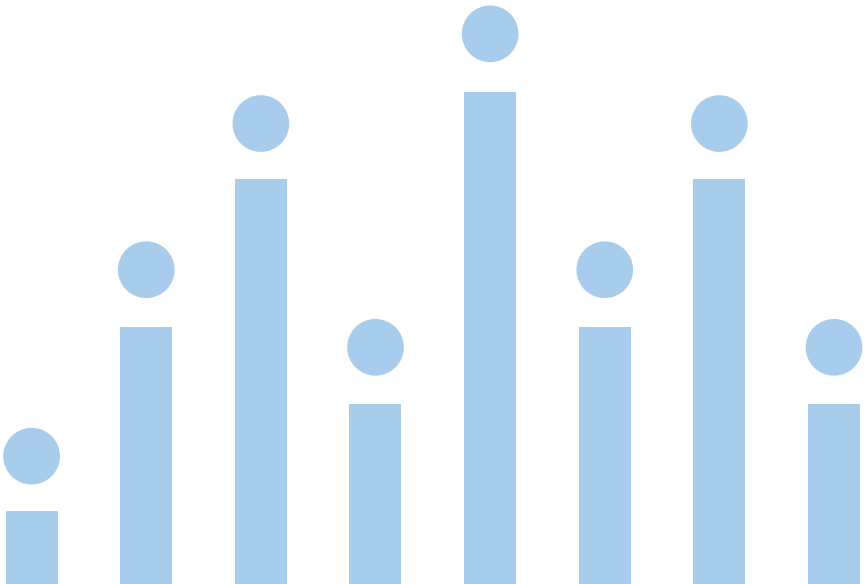
5.1. Conclusions

The health landscaping study aimed to map financial and non-financial health information flows and explore the accountability mechanisms within Kenya's health system. Through multiple approaches, we mapped the status of financial and non-financial data flows, identified the gaps that hinder data integration, and the accountability efforts in the health sector. Our findings point to the need for concerted systemwide interventions to enhance data integration and capacity to access, appraise, synthesize, and use data for decision-making. Numerous yet non-interoperable data processing systems deny the health system the much-needed resources to direct data where it is most needed – by and for routine decision-making, particularly resource allocation.

Similarly, numerous accountability mechanisms in the sector offer hope for better oversight and outcomes, but only if they are well-coordinated and supported to link resources to outcomes (input results). Given health is a devolved function, counties play a key role in health delivery. As such, achieving better accountability outcomes should start with strengthening county-level mechanisms such as the County Assembly.

Related to expanding accountability mandates at the county level, there is a need for stronger sanctions for lack of adherence to public finance management guidelines. Sector experts told us that the lack of sanctions weakens accountability structures and, by extension, outcomes. It does not help that government efforts such as setting reporting standards and work plans do not always translate into accountability, partly because there are no systems to track financial flows and outcomes. Further, at the national level, the stakeholders responsible for budget oversight are not mandated to act when performance reports indicate off-track budget targets. These factors, together with poor coordination across institutions with accountability mandates, lead to inefficiencies in the process of holding relevant stakeholders accountable in cases of non-compliance. This significantly hampers efforts to improve health delivery at the county and national levels.

To address the identified gaps, efforts to improve information flow and enforce accountability should be institutionalized through an accountability framework that links resource allocation, disbursement, and utilization to service delivery indicators and health outcomes.



5.2. Recommendations

Based on the findings of the health landscaping study, we propose the following solutions/ changes to address the identified gaps and improve the data flow process and accountability in the health sector. We describe the envisioned path to impact for each recommendation and propose stakeholders with the mandate to implement the changes.

5.2.1. Strengthening health information flow

Develop clear outcome-based guidelines and templates for capturing and reporting non-financial information.

We found that most stakeholders primarily produce or receive financial reports, with little focus on non-financial information, even when developing financial and performance reports. Respondents attributed this challenge to the lack of guidelines on how to capture and incorporate operational as well as outcome or output data into financial reports. Historically, there has also been emphasis and clear structures in place on financial reporting, while non-financial reporting has not always been part of the main mandate of most government institutions.

The National Treasury is developing a framework for the capture and reporting of financial and non-financial information in the Chart of Accounts that would be useful in facilitating the budgeting and auditing process across all 83 ministries, departments, and agencies. The development process involves working with the Ministry of Health to select priority health outcome indicators and subsequently allocating resources according to these outcome indicators. Once the direct link between results and resources is established, it will facilitate a contractual-type mechanism that directly links budget allocations to the achievement of results, with budgetary responses to over or under-achievement of performance objectives. The National Treasury should then ensure the proactive engagement of health departments in the budgeting process to facilitate the alignment of budget allocations with sector priorities, as laid out in national health strategies and plans. If the health budget is formulated according to health outcomes and outputs and the execution rules align with this logic, it will make budgets more responsive to health sector needs than if the formulation follows an input-based approach. By enhancing data quality and expanding data collection to include indicators of service delivery quality, the Ministry of Health could establish a quality assurance framework to facilitate performance accountability in healthcare. Such indicators of quality might include timeliness in service provision, accessibility and convenience, accuracy of the assistance, courtesy in service delivery, adequacy of information dissemination to potential users, condition and safety of facilities, and customer satisfaction.

The framework by the National Treasury could also include the actors responsible for capturing the data, the systems to be used, the reporting frequency, and ways to utilize it. It could also include ways of improving the reporting processes to ensure in instances where non-financial data is captured, it is captured in easy-to-use formats.

It is paramount to prioritize the capture and processing of both financial and non-financial data in equal measure to ensure the relevant stakeholders have access to complete evidence to inform health budgeting, accountability efforts, and other related decisions. This government effort would also ensure a clear and documented mandate to collect and use non-financial health data.

Strengthen capacity of relevant actors to integrate financial and non-financial health information

Related to the recommendation above to develop a framework for capturing and reporting financial and non-financial health information, the government could enhance the capacity of the personnel responsible. One of the challenges respondents highlighted relating to data capture, use, and reporting is that this role primarily sits with medical personnel who are not trained as data managers and are already overburdened by the workload of health care services due to health staff shortages. Studies have shown that improving the analysis, visualization, and communication of health financial and non-financial data to enhance understanding and use can make government health spending more accountable and responsive (Saleh and O'conner, 2017). As part of the implementation of the Digital Health Act, the MOH should hire dedicated data managers where there is limited capacity and strengthen the capacity of existing data managers to not only capture non-financial information but also integrate it with financial data.

According to Section 6 of the Facility Improvement Financing Act 2023, public health facilities are allowed to retain all revenues generated from services provided. This retention mechanism aims to enhance financial independence and operational efficiency by allowing facilities to directly reinvest their generated funds. This necessitates robust mechanisms to ensure accountability and prevent financial mismanagement. The success of this initiative will depend on the ability of health facility staff and management teams to effectively handle financial management responsibilities. The MoH could develop training modules for the integration and use of financial and non-financial data for their decision-making, ensuring that decisions are informed by the immediate needs and context of the facility.

Alternatively, health records could be digitized at source through the wide adoption of electronic medical records. In addition, for operational data routinely collected by health managers, this challenge could be alleviated by digitizing tools to aid the collection, analysis, transmission, and use of this data.

Establish a formal incentive structure for reporting

We found that there are no formal incentives to promote timely and accurate reporting of the utilization of health resources. The county respondents highlighted the different informal ways they use to encourage facilities to collect quality data and report in a timely manner, including holding review meetings where they recognize sub-counties that are reporting as expected. **Having standardized and well-institutionalized incentives could improve the information flow process, ensuring the timely availability of quality health data to inform health programming and accountability efforts.**

This recommendation targets the MOH and county departments of health to consider establishing formal systems and incentives for reporting. Previous studies have demonstrated the effectiveness of nonfinancial incentive schemes that offer noncash rewards or benefits to motivate recipients using approaches that involve recognition through public profiling or reporting; career advancement opportunities; providing certificates to top performers; and ensuring improved working conditions, such as vacations, grading systems, and packaging interventions with in-kind items (Ashraf et al., 2014; Bernal & Martinez, 2020; Brock et al., 2018; Bufalino et al., 2007; Gauri et al., 2018; Grant et al., 2018)

5.2.2. Enhancing the role of actors with an accountability mandate

Create a well-coordinated forum/platform for institutions with an accountability mandate

Section 3.4 outlines the multiple actors with an accountability mandate at the national and county levels and the intersection of the two levels. The complexity of accountability structures within the two levels of government obscures who is accountable to whom and for what. At worst, this results in tensions within the system and limits health sector managers' ability to comply with multiple accountability demands and act effectively (Rhodes, 2007).

Strengthening joint health planning and finance Technical Working Groups (TWGs), such as the Intergovernmental forum convened by the COG and includes the MoH and county representatives, could encourage data-driven planning and coordination. Such forums facilitate data sharing and improve the health budgeting process by allocating resources according to the highest need and impact, ultimately improving health programming in the counties. For example, in Tanzania, a PFM Working Group that includes representatives from the Ministry of Health ensures that improvements to the health financing system are being considered as part of ongoing efforts to strengthen the PFM system (Cashin et al., 2017).

Additionally, **a partnership between the accountability overseers and enforcers could enhance accountability in the health sector. Close collaboration between the OAG, OCOB, and the Parliament could strengthen each of their respective roles and ensure that the recommendations from the** OAG and OCOB are implemented effectively. The Parliament has the mandate to convene these partners.

Review existing legislation to streamline the roles of the institutions with an accountability mandate.

Given the multiple actors playing the accountability role, the existing legislation may need to be reviewed to identify gaps in the actors' mandates and consequently inform the streamlining of roles and responsibilities of the various actors. This could also address any issue of overlapping mandates among the institutions.

5.2.3. Strengthening information systems for better accountability outcomes

Enhance interoperability of KHIS and IFMIS systems

The quantifiable improvement in a patient's health outcomes relative to the expense of attaining that improvement is what defines value in health care (Teisberg et al., 2020). To improve value, its measures should be developed, validated, and utilized by stakeholders, enhancing motivation for improvement. This will require the exchange of information between financial and non-financial information systems. However, limited interoperability of health and finance systems emerged among the main challenges respondents experience in the health information flow process. The main health system, KHIS, and the main financial system, IFMIS, are not linked. The National Treasury and MOH could consider linking KHIS and IFMIS to ease the process of integrating financial and non-financial information. This would ensure financial and non-financial health information is easily accessible to the relevant stakeholders to inform health programming and resource allocation decisions, improving health delivery. Also, these systems' ability to exchange information would strengthen the functions of the institutions with an accountability mandate since they would have access to comprehensive financial and non-financial information to inform their mandates.

Integrate all health information systems to a unified health system

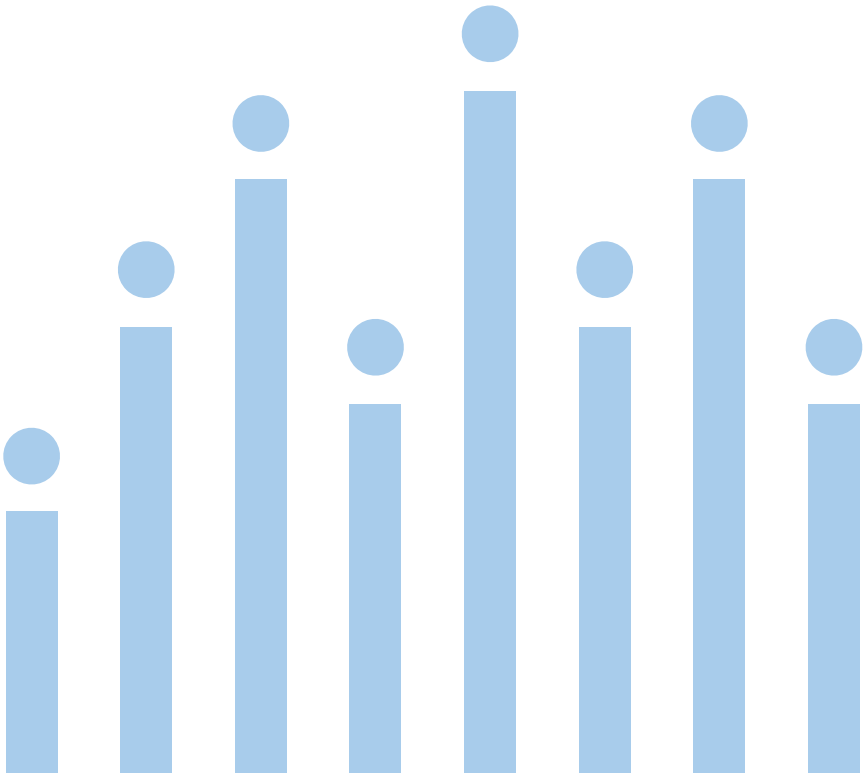
The sharing of information among different levels of healthcare has a link to the quality, efficiency, and safety of care provided to a patient (Torab-Miandoab et al., 2023). However, there are multiple health information systems that have yet to be integrated with the primary health system, KHIS. This has led to fragmentation of health data, hindering accountability and other key health decisions depending on data. The government, through the MOH, should continue efforts to create a digital superhighway as part of the Digital Health Act to enhance the integration of health information systems by creating a unified system. In addition to the existing health systems, the unified system could include digitized devices for collecting health operational data routinely collected through supervision and other processes each quarter. These devices could reduce transcription errors, redundant testing, and the time spent on manual data entry, leading to more efficient healthcare processes (He et al., 2022).

Table 3 below summarizes the recommendations and proposed strategic plan to address the identified challenges and drive positive change in the health data flow process by enhancing accountability.

Table 3: Summary of recommended Theory of Action (ToA)

Identified challenge	Proposed intervention/solution	Target output/ outcome	Proposed responsible actors
Lack of guidelines on how to capture and incorporate outcome or output data into financial reports	Develop clear outcome-based guidelines and templates for capturing and reporting non-financial information	Complete and consistent non-financial health indicators that can be used to create trends to assess health outcomes, efficiency and cost-effectiveness of health delivery in Kenya.	MOH and National Treasury
Lack of a definitive framework for integrating financial and non-financial information	Institutionalize a framework for integrating financial and non-financial information	Complete dataset with integrated financial and non-financial information that can be used to inform accountability efforts	National Treasury and MOH
Limited capacity to capture and integrate financial and financial health information	Strengthen capacity of relevant actors to integrate and use financial and non-financial health information	Enhanced utilization of health data to inform health programming and accountability	MOH
Lack of formal incentives or sanctions to promote reporting	Establish a formal incentive structure for reporting	Improved and timely reporting of health data to inform health-related budgeting and other decisions	MOH County Departments of Health

Poor coordination and information sharing among the actors with an accountability mandate and between the two levels of government	Create a well-coordinated forum/ platform for institutions with an accountability mandate	Enhanced information sharing and collaboration to implement recommendations geared toward improving health care delivery	Parliament and county assembly
Poor interoperability of financial and health systems	Enhance interoperability of KHIS and IFMIS systems	Availability of complete financial and non-financial information to improve health related decisions	National Treasury and MOH
Multiple health information systems that are not integrated	Integrate all health information systems to a unified health system	Centralized system where health and other actors can easily access complete and accurate health indicators information to inform budgeting, accountability and other health activities	MOH



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7. Appendix

Appendix 1: Institutions with an accountability mandate and key health sector reports

Table 4: Summary of institutions and actors with an accountability mandate

Institution	Accountability mandate	Challenges	Proposed solutions
National level actors			
a) National government			
Parliament	The Senate and National Assembly play pivotal constitutional roles as watchdogs and enforcers of recommendations from other oversight institutions. They conduct oversight hearings and inquiries to monitor the performance of government entities across sectors, and are responsible for enforcing OAG and OCOB's recommendations on submitted audit and budget implementation reports, respectively.	Despite health being devolved, counties still depend on the national level for capacity and financial support, sometimes introducing complexities on the independent accountability roles of the County Assembly and the Senate. This has resulted in overlaps and competing roles between county assemblies and the Senate. Additionally, the health committees lack baseline data on key health indicators and the cost of delivery of health services to reference when assessing the utilization of health resources.	The Parliament could enhance its oversight function by recommending or enforcing that all budget submissions by the health sector to always link both financial and non-financial data to inform resource allocation. The Parliament could also explore establishing structured partnerships with other oversight institutions, such as the OAG, OCOB and the County Assembly to strengthen accountability across levels of government by ensuring coordination of functions
The National Treasury	Plays the paramount role of leading the budgeting preparation and planning process.	The budgeting process mainly relies on historical data, and there is limited use of non-financial information to justify the financial resources required by the different sectors, including health.	Finalize the development of 'Bajeti Yetu portal' for capturing and including non-financial data in budget making decisions. Further, integrating the financial and non-financial data in the budget proposals to Parliament would help inform the budget approval process.

Ministry of Health (MOH)	MOH is responsible for managing and holding level 6 health facilities accountable. It is also responsible for developing and championing the enactment of health policies and reforms to improve health outcomes and accountability.	Capacity gaps to support health facilities and the lack of incentives for reporting	Spearhead the implementation of solutions such as coming up with official incentives and enforceable sanctions to promote accountability in reporting financial and health outcomes data.
b) Independent constitutional institutions			
The Office of the Controller of Budget (OCOB)	OCOB draws its mandate from Article 228 of Kenya's Constitution (GoK, 2010). Its core functions are to approve withdrawals from public funds and oversee the implementation of both national and county government budgets. Therefore, OCOB is central to ensuring fiscal accountability by assessing whether budgets are implemented as intended.	Limited access to non-financial information, multitude of reporting standards and templates, and poor integration of financial and non-financial information by counties when submitting their reports. The OCOB also lacks a Central Data Management and Retrieval System for data storage and management of information provided by the counties.	Incorporate the use of non-financial information, such as health outcome indicators, to assess the results of utilization of all health resources deployed toward Kenya's national health goals. The Government and development partners could aim to support ongoing efforts by OCOB to develop the Controller of Budget Management Information System (COBMIS), a platform that would consolidate financial and non-financial information from different sources to provide a complete picture of the utilization of public resources across sectors, including health.
The Office of the Auditor General (OAG)	The OAG is mandated to audit and report on the utilization and management of public resources by government entities. They reconcile disbursements against expenditures and conduct financial audits to assess value for money and effective use of resources. In addition, they also conduct compliance, special, and performance audits.	Performance audits are only conducted upon request by relevant stakeholders, including the public outcry. Additionally, audits are mainly post-facto processes and sometimes lack field verification of the data provided, posing a potential gap that can impact the findings and recommendations found in audit reports.	The OAG could consider conducting performance audits more frequently, particularly within the health sector, aligning with ongoing health reforms. Further, the OAG could explore reforming the audits to link resource allocation to utilization and finally to outcomes. The OAG could also improve its audit reports publication timelines to allow action to be taken where misappropriation are reported.

Commission of Revenue Allocation (CRA)	CRA's core constitutional mandate is to recommend the basis for equitable revenue and resource sharing. It also has the role of encouraging fiscal responsibility across national and county governments.	Currently, CRA uses operational data, such as population and workload data, from KNBS and MOH to inform the revenue sharing formula, instead of using outcome or output indicators. The study found that there is also no direct flow of data from counties to CRA.	Finalize development of the fiscal responsibility index to measure how counties are spending public resources. CRA could also use non-financial data on county performance to inform its recommendations on the horizontal revenue sharing formula across counties.
The Intergovernmental Relations Technical Committee (IGRTC)	IGRTC facilitates cooperation and consultations between the two levels of government, including on matters relating to accountability within government. It coordinates with the COG on counties-related matters, and brings together the relevant national level actors needed to address different issues.	Lack of baseline data to reference in efforts to hold county and national level actors accountable	Given its mandate, IGRTC, in collaboration with the COG, could create a platform for counties to learn and adapt strong accountability mechanisms that are effective at the national level to the county level, especially as devolution continues to mature.
Devolved actors			
County Assembly	The County Assembly approves budget estimates, which include health allocations, and receives reports on the performance of the county. Through approving budget estimates and receiving reports on county performance, the County Assembly wields significant legislative authority, ensuring responsible use of health resources. Additionally, the Assembly has an established County Assembly Health Committee responsible for addressing different health matters.	Limited use of non-financial information to inform the accountability mandate	Health committees can enhance their accountability role by demanding health stakeholders demonstrate the change in health outcomes in the county to justify health expenditure in a given period, and proposed health budgets.

Health Facility Management Committees	Comprise the facility in-charge and community representatives responsible for assessing facility needs to inform budget estimates and reviewing expenditures	Limited capacity to use data to hold facilities accountable for health delivery	MOH could empower health facility management committees by providing them with facility level expenditure data against the target and the achieved health outcomes to hold health facilities accountable. Empowering these committees as watchdogs could improve accountability at the grassroots level.
County Finance and Health Departments	The finance department is responsible for budget preparation and prudent financial management across all sectors, including health, while the health department handles health planning, budget estimation, and overseeing county health system operations.	Limited staff capacity to capture and integrate data as well as inter-departmental coordination barriers hinder effective data utilization. The county-level respondents reported that health and finance teams often fail to coordinate and share information effectively, compromising healthcare delivery improvement efforts.	Requiring the formation of technical working groups focused on health and finance would be a pivotal measure in bridging this divide and promoting stronger collaboration between health planners and individuals responsible for resource allocation and oversight.
Other actors			
Civil Society Organizations (CSOs)	Facilitate civic engagements and empower citizens to promote advocacy for delivery of quality services and prudent utilization of public resources	Challenges persist in empowering the public with accurate and comprehensive data to effectively hold leaders accountable for optimal health delivery.	Relevant CSOs, such as the International Budget Partnership (IBP), should continue with civic education to promote public participation in accountability matters.
Citizens	The voice of the people is a critical accountability mechanism. For example, public outcry, often facilitated through media or advocacy efforts, has sometimes prompted the Auditor General's Office to initiate performance audits.	Access to complete and accurate information to hold relevant actors accountable for their actions and performance	Continue taking an active role in holding health stakeholders accountable for delivering high quality health care services.

Development partners, such as UNICEF	The Development Partners emerged as key in supporting accountability in Kenya's health sector. Different partners fund specific health interventions aligned with their priorities. For instance, USAID primarily funds HIV initiatives, and UNICEF often funds systems-strengthening interventions.	Potential learning point for government: Some development partners attach their budget support to specific outcomes, a condition that translates to timely reporting of financial and health outcome indicators. It also promotes prudent use of conditional grants to ensure the facilities continue to benefit from the partners' support. This presents a potential learning opportunity for government actors to assess the aspects of reporting to development partners that can be incorporated into the government's reporting requirements and the process of holding health actors accountable.

Table 5: Key health sector reports with non-financial data

Report title	Description of the report
Medium Term Expenditure Framework (MTEF) for the Period 2024/25-2026/27	This report presents an analysis of the Health Sector performance and achievements for the period 2020/21 to 2022/23, the priorities and resource requirements for the period 2024/25 to 2026/27, cross-sector linkages, emerging issues, challenges, and recommendations. The report is prepared at the National Treasury by a team of Sector Working Group and Secretariat officers drawn from different departments and institutions within the health sector with guidance from the National Treasury and Planning. This report is prepared at the national level and provides a structured approach to integrating fiscal policy and budgeting over a multi-year horizon, typically spanning at least three years beyond the current budget.
County Annual Development Plans	A County Annual Development Plan (ADP) is prepared pursuant to Section 126 of the Public Finance Management Act 2012 to set out the County's annual development priorities and plans for the forthcoming year. An ADP document cascades the five-year County Integrated Development Plan (CIDP) initiatives into yearly strategies while assessing the implications of the program interventions to the short-term financial and economic environment. County Annual Development Plans (CADPs) are produced annually at the county level. Once consolidated and reviewed by the County Executive Committee, the draft is presented to the County Budget and Economic Forum (CBEF) and opened for public participation before being submitted to the County Assembly for review and approval by September 1st
County Annual Progress Review Reports	County Annual Progress Report (APR) is premised on Section 129 of the Public Finance Management (County Governments) Regulations 2015 to provide further a framework for Monitoring and Reporting on non-financial performance. As an outcome of the County Integrated Monitoring and Evaluation System (CIMES), the APR facilitates tracking of progress in implementing key policies, plans, programs and projects and further provides updated information necessary for effective and efficient decision-making. These reports are produced annually at the county level. The successful preparation of the CAPRs is achieved through the collaborative effort of the County Treasury officers and county government departments

Kenya Harmonized Health Facility Assessment (KHFA) 2018/2019, Ministry of Health, Kenya.	The Kenya Harmonized Health Facility Assessment (KHFA) was designed as a system to provide standardized assessments consisting of harmonized modules that cover all key blocks of service provision in a health facility, including service availability, service readiness, quality and safety of care, and systems that support management as well as functionality of community structures. The report provides information needed for planning health investments in Kenya through the UHC Roadmap. The Division of Health Sector Monitoring and Evaluation under MoH prepare the report annually at the National level.
Kenya Housing Population Census (KPHC), KNBS	The Kenya Housing Population Census (KPHC) reports are produced after 10 year periods, with the most recent one conducted in 2019.The main objective of the 2019 KPHC was to collect information on the size, composition, distribution and socio-economic characteristics of the population. The National Census Steering Committee spearheaded the implementation process and provided policy direction such as approving all the census guidelines, strategies and mobilization of resources. At the county level, the County Census Committees (CCCs) and Sub-County Census Committees (SCCCs) were established to oversee implementation of the 2019 census activities, such as recruitment of personnel, procurement of training venues and logistical arrangements for transport and security at their respective levels. The report focuses on infant, under-five, adult, life tables, and maternal mortality and their differentials by place of residence and across counties. Mortality is an important indicator for measuring a country's health and socio-economic development. It helps identify the country's current and future demographic status, the category of the population that is supposed to be considered for special government programs such as social protection and health, and to monitor and evaluate the success or failure of programs already in place. For example, adult mortality affecting the economically active population is related to other variables such as fertility and labour productivity.
2022 Kenya Demographic and Health Survey (KDHS), KNBS	The primary objective of the 2022 KDHS is to provide up-to-date estimates of demographic, health, and nutrition indicators to guide the planning, implementation, monitoring, and evaluation of population and health-related programs at the national and county levels. This survey is carried out by the Kenya National Bureau of Statistics in collaboration with the Ministry of Health every 5 years.
Kenya Health Service Delivery Indicator Survey (KESDI) 2018 report	The report provides a set of key indicators that benchmark service delivery performance in the health and education sectors in Sub-Saharan Africa. The overarching objective of the SDI is to ascertain the quality of service delivery in basic health services and primary education. This would, in turn, enable governments and service providers alike to identify gaps and bottlenecks, as well as track progress over time. The broad availability, high public awareness, and persistent focus on the indicators that SDI provides will help mobilize policymakers, citizens, service providers, donors, and other stakeholders to take the necessary steps to improve the quality of service delivery and thereby improve development outcomes. This Kenya Health SDI report was prepared under the Ministry of Health's (MOH) leadership with technical guidance from development partners such as the World Bank and other MDAs.

Appendix 2: Study participants

We engaged stakeholders from both the national and county levels in the study. Table 6 below highlights the institutions and departments represented through key informant interviews.

Table 6: National-level KII respondents' institutions and their mandates

Institution	Department/roles interviewed
Completed interviews	
Ministry of Health	Health Financing Department Health Informatics Division
National Treasury	Budget, Fiscal and Economic Affairs Directorate
National Assembly	Health Committee
The Senate	Health Committee
The Office of the Controller of Budget, Kenya	Research and Budget Implementation Department
Office of the Auditor General, Kenya	Health Sector Auditors
The Council of Governors	Health Technical Committee
4 Counties - Nairobi, Nakuru, Trans Nzoia and Kilifi Counties	County Department of Health - CHRIOs and Health Directors
Development partners	UNICEF Health team
Kenyatta National Hospital	M&E unit
CRA	County Affairs
IGRTC	Programs
NHIF	
Kenya National Bureau of Statistics (KNBS)	

Appendix 3: County Selection Criteria

We also identified counties to engage based on the following criteria:

1. **County advancement in implementing health financing reforms:** We prioritized working with counties that are well advanced in implementing progressive health reforms as well as those that are less advanced to get a good balance of perspectives from counties that are doing well and that are not. We used the implementation of the health facilities' autonomy reforms that allow health facilities to retain their own-source revenue as a proxy to determine counties that are advanced in implementing health reforms. We relied on a report called Facility Autonomy In The Age Of Devolution: County-Level Arrangements For Managing Health Facility Revenue In Kenya (ThinkWell, 2023) to identify counties that fit this criteria.
2. **Availability and accessibility of financial and non-financial data in the county:** We used the International Budget Partnership's Kenya County Budget Transparency Survey (CBTS) 2022 to determine the availability and accessibility of budget data in counties. The CBTS ranks counties per the national budget transparency index and highlights how the counties are performing in terms of availing budget documents to the public as required by law. We aimed to work with two counties performing above average and another two performing below average to better compare how health data flows in the different types of counties.
3. **Political will for making a change in the health sector:** We considered the governor's manifesto and the County Integrated Development Plans to determine the county's prioritization of the health sector. We aimed to work with counties committed to improving health care.
4. **Population size of the county: We targeted two counties of differing sizes for our study:** one with a smaller population and one with a larger population. This approach was designed to provide a balanced comparison.
5. **Existing relationship between the county stakeholders and IDinsight or our partners:** We prioritized working with counties where we already have existing working relationships or where our partners, such as ThinkWell, have connections and can introduce us. Given the short timeline we had to implement the study, this made it easier to access the county, a critical component to the success of the study.
6. **The feasibility of in-person data collection and implementing the mapping in the county:** Given that this study required us to visit counties to conduct interviews, we considered each county's security situation and the county's proximity to Nairobi. Consequently, we excluded counties that presented notable security risks and those that were difficult to access by road and air.

Based on the criteria described above, we selected Nakuru, Nairobi, Trans-Nzoia, and Kilifi counties for our study and engaged stakeholders from the departments of health and finance in the landscaping.

Table 7: County selection criteria

Criteria/ County	Nakuru	Kilifi	Nairobi	Trans-Nzoia
Existing relationships with IDinsight and/or our partners	We built upon existing relationships and projects to engage the county in this study.	IDinsight recently implemented a project in Kilifi. We also built upon our existing relationship with the County Health Department.	IDinsight has established relationships with various organizations, sector experts, and partners in Nairobi	We built upon existing relationships and projects to engage the county in this study.
County advancement in implementing health financing reforms	Nakuru is one of the few county governments that allow health facilities to retain their own-source revenue. Source: ThinkWell paper	Kilifi is still less advanced in such health reforms, which presents a good balance to compare with a more advanced county	In practice, facilities in Nairobi County retain the own-source revenue in their accounts. Source: ThinkWell paper	Trans Nzoia is still less advanced in such health reforms, which presents a good balance to compare with a more advanced county
Feasibility of visiting the county/in-person data collection in the county	Good proximity to Nairobi and no security concerns - feasible to conduct in-person data collection	No security concerns - feasible to visit the county	Most IDinsight staff in Kenya are based in Nairobi	No security concerns - feasible to visit the county
Availability and accessibility of data (use IBP's CBTS to determine this)	Nakuru County scored above the average National Budget Transparency Index for 2022 - IBP's 2022 CBTS.	Kilifi scored below the average National budget transparency index for 2022. Kilifi summary - 2022 CBTS	Nairobi County scored above the average National Budget Transparency Index for 2022 - IBP's 2022 CBTS.	Trans Nzoia scored below the average National budget transparency index for 2022 - IBP's 2022 CBTS
Political will for making a change in the health sector	One of Governor Susan Kihika's priorities is to improve health - manifesto	Kilifi Governor, Gideon Mung'aro, has given the health docket priority in his administration - CIDP	Priority to Implement the recommendations of the Nairobi County Health Reforms Taskforce Report dated January 2023	In ensuring healthy lives and sustainable well being for all residents, Trans-Nzoia County, has embarked on massive rehabilitation and upgrading of its health care system i.e. County Referral hospital, County Hospital, Sub-County hospitals etc. - CIDP

Appendix 4: Health Information Systems

The table below describes some of the HIS that respondents highlighted they use to capture different types of health data.

Table 8: Health information systems used for non-financial reporting in Kenya

System name	Description
Kenya Health Information System (KHIS)	The use of KHIS varies depending on the role of the user. Health workers use the system to capture patient data, track health outcomes, and report disease outbreaks. 1. The KHIS Aggregate • It is used by the MoH to collect, manage, and analyze health data from various health facilities nationwide. The system is designed to support health information management at all levels of the health system, from the national level down to the community level. • The KHIS Aggregate collects data on various health indicators, including maternal and child health, infectious diseases, non-communicable diseases, and other health-related topics. • The web-based system allows health facilities to enter and submit their data online, making it easier and faster to collect and analyze health information. 2. The KHIS Tracker • It is used to track and monitor health services and programs in Kenya. The KHIS Tracker is designed to provide real-time information on health facilities' availability and utilization of health services, resources, and commodities. • It helps to identify gaps and challenges in the health system and allows health managers to make informed decisions for improving the quality and efficiency of health services. 3. The KHIS Event Capture • It's used to capture data on disease outbreaks and other public health events in real-time. It enables health workers to report outbreaks quickly and allows health managers to monitor and respond to public health emergencies effectively.
Kenya Health Master Facility List	• Kenya Master Health Facility List (KMHFL) is an application with all Kenya's health facilities and community units. Each health facility and community unit is identified with a unique code and details describing the geographical location, administrative location, ownership, type and the services offered. • Kenya Master Health Facility List admin is the user-restricted site that manages the facility data. This is accessed primarily by Sub-county Health Records Information Officers and County Health Records Information Officers to update, create and manage facilities and community units.

Electronic Medical Records (EMR)	• In Kenya, the EMR systems used in various private and public hospitals include the Comprehensive Patient Application Database (CPAD), IQ Care, Care 2000, Funsoft, Compact, and Open Medical Record System (OpenMRS) (Waithera et al., 2017). • Some hospitals have also deployed or developed customized electronic systems that they use to capture data. For example, the Kenyatta National Hospital reported that they have an e-hospital platform that they mainly use to capture clinical data; Trans-Nzoia county is using a system called MEDBOSS and another called DORMAS to capture outpatient registration data; Nakuru County reported to be using the Elephant and AfyaKE systems. Nakuru County also reported they have a system they use to create physical dashboards that they use for data visualisation and tracking.
TIBU	• Kenya has a TB Patient Management System and reporting platform known as TIBU, which captures case-based data. The case-based data is entered in TIBU by the TB coordinators, on a monthly or quarterly basis, on behalf of the facilities. Further, the case-based data is aggregated and summarised for further uploading in KHIS on a quarterly basis, which is used by the National Tuberculosis Program (NTP) for program review. • Additionally, to complement the existing national HMIS data systems, the TB Data from KHIS can easily be analysed with indicators of other programs, which enable comprehensive data review and analysis of TB data nationally. • To strengthen the community-based screening practices of the NTP and improve the frequency of data reporting, a supporting tool called TIBU lite has been integrated with the Community Worker App for community level monitoring.
KenyaEMR	• This system is used to capture and monitor HIV data in Kenya. It avails quality patient level HIV data to enhance HIV reporting and programming.
Electronic Community Health Information System (ECHIS)	• At the community level, the transition to digital data collection through ECHIS is ongoing; Community Health Practitioners (CHPs) have started using tablets for data collection. This system is already being implemented in Kilifi and Nakuru counties.

Appendix 5: Sector allocations for FY 2022-23 vs 2023-24 (Ksh. Millions)

Figure 3: Sector allocations for FY 2022-23 vs 2023-24 (Ksh. Millions)

Sector	Approved Estimates FY 2022-23	% Share of NG Budget	FY 2023-34 Estimates	% Share of NG Budget
Agriculture, Rural & Urban Development	66,697.30	3%	84,826.48	4%
Energy, Infrastructure and ICT	407,760.10	19%	433,159.24	19%
General Economic and Commercial Affairs	28,294.20	1%	54,318.80	2%
Health	122,519.30	6%	140,356.52	6%
Education	544,519.50	26%	604,016.20	27%
Governance, Justice, Law and Order	234,408.10	11%	227,926.16	10%
Public Administration and International Relations	356,857.60	17%	310,230.93	14%
National Security	177,811.00	8%	187,044.16	8%
Social Protection, Culture and Recreation	73,213.50	3%	70,482.95	3%
Environment Protection, Water and Natural Resources	107,178.20	5%	115,344.72	5%
TOTAL	**2,119,258.80**		**2,227,706.26**	

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