



ATOM Coalition: Health Financing Case Studies

Kenya Case Study



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Abbreviations

ADT	Androgen Deprivation Therapy
ATOM Coalition	Access to Oncology Medicines Coalition
CML	Chronic Myeloid Leukemia
EAC	East African Community
ELISA	Enzyme-Linked Immunosorbent Assay
EML	Essential Medicines List
GBD	Global Burden of Disease
GDP	Gross Domestic Product
GIST	Gastrointestinal Stromal Tumours
GOK	Government of Kenya
HER2	Human Epidermal Growth Factor Receptor 2
HISP	Health Insurance Subsidy Programme
HRIO	Health Records Information Officers
KARO	Kenya Association of Retired Officers
KEMSA	Kenya Medical Supplies Authority
KEPH	Kenya Essential Package for Health
KESHO	Kenya Society of Haematology and Oncology
KHIS	Kenya Health Information System
KMLTTB	The Kenya Medical Laboratory Technicians and Technologists Board
KRA	Kenya Revenue Authority
LMICs	Low- and Middle-Income Countries
MCDA	Multi-Criteria Decision Analysis
MEDS	Mission for Essential Drugs and Supplies
MOF	Ministry of Finance
MOH	Ministry of Health
MTEF	Medium-Term Expenditure Framework
NCCP	National Cancer Control Programme
NCI	National Cancer Institute
NEMIS	National Education Management Information System
NHIF	National Health Insurance Fund
NORL	National Oncology Reference Laboratory
OOP	Out-of-Pocket Expenditures
OPSD	Older Persons with Severe Disability
PCR	Polymerase Chain Reaction
PHC	Primary Health Care
PSA	Prostate Specific Antigen
SHA	Social Health Authority
SSA	Sub-Saharan Africa
UHC	Universal Health Coverage
UICC	Union for International Cancer Control
WHO	World Health Organization



Introduction

One in eight people will face a cancer diagnosis in their lifetime.¹ With improved access to treatment in high-resource settings, mortality from cancer is expected to cluster in low- and middle-income countries (LMICs), with 75% of cancer-related deaths occurring in these countries by 2030.² Ensuring fair access to cancer treatments in LMICs is crucial for bridging the widening gap in cancer survival rates between wealthier and poorer nations.

The Union for International Cancer Control (UICC)-led Access to Oncology Medicines (ATOM) Coalition, launched in 2022, partners with the public and private sectors to enhance access to oncology medicines. Out-of-pocket expenditures (OOP) for oncology medicines contribute significantly to financial toxicity for cancer patients and their families.³ The World Health Organization (WHO) reports that only 39% of countries include the minimum package for effective cancer management in their health benefits packages, which falls to 28% when palliative care is included. Significant disparities exist among WHO regions and World Bank income groups, with low- and lower-middle-income countries having the least coverage.⁴

The ATOM Coalition, in collaboration with countries and partners, aims to secure sustainable funding for essential cancer medicines, ultimately reducing mortality and promoting human development. For this purpose, the Coalition conducts case studies to examine how low- and lower-middle-income countries are addressing cancer financing and how best to support them, with a focus on cancer medicines and diagnostics, within Universal Health Coverage (UHC).⁵

¹ International Agency for Research on Cancer, WHO. Cancer Tomorrow. Global Cancer Observatory <https://gco.iarc.fr/tomorrow/en> (2021).

² Anandasabapathy, S., Asirwa, C., Grover, S. et al. Cancer burden in low-income and middle-income countries. *Nat Rev Cancer* 24, 1170 (2024). <https://doi.org/10.1038/s41568-023-00659-2>.

³ NCD Alliance and the George Institute. 2023. Paying the Price: A deep dive into the household economic burden of care experienced by people living with noncommunicable diseases. NCD Alliance, Geneva.

⁴ WHO. 2024. WHO global survey on the inclusion of cancer care in health-benefit packages, 2020–2021. Geneva: WHO; 2024. Licence: CC BY-NC-SA 3.0 IGO.

⁵ Typically, medications account for the highest portion of OOP among all cancer treatment costs.



This involves identifying best practices and gaps that require policy action, with support from ATOM Coalition partners and other global actors. To facilitate data collection and analysis, the ATOM Coalition and ThinkWell have developed a customised health financing diagnostic. The diagnostic expands upon the WHO UHC model, incorporating specific aspects related to access to affordable medicines. It consists of two pillars: (i) enhancing individual and household affordability through demand-side interventions, specifically effective financial coverage, and (ii) improving the health system's affordability of cancer medicines via policy interventions related to prioritisation, pricing, and procurement (Figure 1).

Through this diagnostic the ATOM Coalition hopes to:

- i. Empower public and private sector stakeholders to embrace an evidence-driven strategy for financing oncology medicines, significantly improving access for patients in need.
- ii. Showcase the power of public-private partnerships, innovative financing solutions, and countries' commitment to financing cancer medicines.
- iii. Identify specific areas where action is needed at the country level.
- iv. Collaborate with countries and partners to implement the identified actions for each country.

Figure 1: ATOM Coalition Health Financing Diagnostic

Components	Objectives	Intermediate outputs
Component 1: Financing cancer actor landscape	Identify key actors that influence financing & affordability decisions to ensure 'pull through' actions are clear	▪ Curated, prioritised evidence on financing barriers to understand: ○ Who is covered? ○ What services? ○ How much and financial protection implications? ○ Role of public and private insurance systems ○ Other financial protection mechanisms ▪ Clear understanding of price mark-ups along the supply chain ▪ Reproducible and adaptable assessment approach and tools for use in other ATOM Coalition priority countries
Component 2: Health financing and affordability diagnostics	Understand and assess the way oncology services are financed in the country, along each of the three 'health financing pillars' using a UHC lens	
Component 3: Prioritisation, pricing and procurement	Understand how countries prioritise oncology medicines purchase (under public budgets) and market dynamics impacting availability and access.	

The ATOM Coalition plans to use the health financing diagnostic and implement subsequent actions in up to 16 countries identified in the 2025–2030 ATOM Coalition Strategic Plan. The diagnostic and related resources will be



available globally, including in all future ATOM Coalition target implementation countries.

Kenya was chosen for a case study for the following reasons:

1. Kenya is participating in the ATOM Coalition Phase 1 implementation.
2. Cancer medicines, including innovative treatments, are included in UHC.
3. Government policies demonstrate a commitment to lowering out-of-pocket costs for oncology services and ensuring access to a comprehensive benefits package.



Executive Summary

According to the World Bank, Kenya is a lower middle-income country (GDP per capita USD 1,952.30) with a Gini (Equality) Index of ⁶ approximately 39% and a poverty headcount of 38%. ⁷ Among non-communicable diseases (NCDs), cancer is the second leading cause of death in Kenya. The cancer burden has steadily increased in Kenya and is associated with multiple risk factors, including the ageing of the population. Among females, breast cancer has the highest incidence rate (25.5%), followed by cervical (20.6%), oesophageal (6.1%), colorectal (5.6%), and ovarian (4.4%). Among males, the cancers with the highest incidence rates include prostate (21.9%), oesophageal (9.9%), colorectal (9.1%), stomach (5.4%), and non-Hodgkin's lymphoma (5.3%). Cancer affects Kenyans of all ages and socioeconomic backgrounds. Approximately half (47%) of the cancer cases in both sexes are diagnosed in advanced stages (stage III and IV). This results in limited treatment options, high OOP, poor prognosis, and increased fatality rates. ⁸

Overall Health Financing Trends and Challenges

Kenya's healthcare expenditure is approximately USD 94 per capita, slightly higher than the Sub-Saharan Africa (SSA) average of USD 84.80. This spending level also aligns closely with the average for lower-middle-income countries, about USD 90 per capita. Approximately 48% of health expenditures in Kenya are sourced from public funding, while around 23% is contributed by OOP, with the remainder deriving from external support. Public spending on health in Kenya is slightly above the average for SSA (40%) and exceeds that of other lower-middle-income countries (34%). Notably, Kenya ranked as the sixth largest recipient of USAID funding in Africa. However, recent suspension of this funding may lead to a decline in external support, which could intensify competition for public financing of both communicable and non-communicable disease programs. The fiscal environment in Kenya is currently constrained, marked by a

⁶ 0 is perfect equality and 100 is perfect inequality.

⁷ World Bank. Kenya Poverty and Equity Assessment 2023 – From Poverty to Prosperity: Making Growth More Inclusive: Executive Summary (English). The World Bank, Washington, DC <http://documents.worldbank.org/curated/en/099121323073037589>.

⁸ World Bank. 2020. Economic and Social Consequences of Cancer in Kenya: Case Studies of Selected Households. Health, Nutrition and Population (HNP) Case Studies. The World Bank, Washington, DC.



significant public debt burden. In response, the government is working to enhance tax revenue collection, particularly within the informal sector.

Cancer Financial Protection for Households

The National Health Insurance Fund (NHIF), now known as the Social Health Authority (SHA) serves as a crucial source of cancer financing for the population, provided that individuals are enrolled with SHA. Before October 2024, when this study was undertaken, the NHIF included coverage for inpatient and outpatient services. The former fund has been renamed the Social Health Insurance Fund (SHIF) and integrated as one of the funds within the SHA. This case study offers insights from the previous fund (NHIF). It serves as a valuable baseline for grasping the effects of the new health financing arrangements on cancer coverage, including access to medicines and diagnostics in Kenya.

The previously known NHIF began covering cancer treatments in 2016. The cancer package covered basic chemotherapy sessions at KES 25,000 per cycle for a maximum of 6 cycles, complex chemotherapy at KES 100,000 for up to 6 cycles, and radiotherapy sessions for up to 20 sessions at KES 3,600 per session. Since 2016, this package has evolved to include more medicines, including innovative treatments. The SHA has proposed to cap the package at KES 400,000 (USD 3,095) for treatment and diagnostics.

Under the original NHIF, the broader cancer coverage masked disparities across groups enrolled under the National Scheme, which covered the general public, including formal and informal sector workers, and the Enhanced Scheme, which covered civil servants. The National Scheme provided less comprehensive coverage than the Enhanced Scheme. For example, average payouts for prostate and breast cancer care were highest among the Enhanced Schemes and lowest in the National Scheme. The average payouts per claim for the highest Enhanced Scheme were more than double the National Scheme average payout for prostate cancer and more than quadruple for breast cancer.

The differences in coverage across the National and Enhanced Schemes had implications for OOP for the different groups. During the study period in 2024 and before the new SHA system was introduced, it is estimated that patients seeking cancer care in facilities under the National Scheme contracts had to cover up to 48% of the treatment costs from alternative sources,



including OOP. The unpaid OOP proportions to cancer facilities were highest under the National Scheme at 57% (four times the rate of the following Enhanced Scheme) and lowest in the Enhanced Schemes. Additionally, against an average of 48% among all cancers, the highest unpaid proportions for cancer care services in non-comprehensive contracts were under Inpatient services (70%).

The new SHA has integrated the various healthcare schemes into a unified UHC program. This aims to improve equity among income groups and provide comprehensive cancer treatment for all Kenyans. Additionally, the transition to mandatory enrolment in the SHIF addresses the previous issue of voluntary sign-ups, which often occurred only when individuals fell ill.

Prioritisation and Purchasing Arrangements for Cancer Commodities

There is a strong alignment between the WHO-recommended essential oncology medicines, the Ministry of Health procurement list, and the Kenya Medicines Supply Authority (KEMSA). Notably, 92% of breast cancer treatments (12 out of 13) and 60% of prostate cancer drugs (3 out of 5) are included in the KEMSA list. Many of these essential drugs are also reflected in local treatment guidelines and cancer centre formularies.

KEMSA plays a significant role in procuring oncology medicines for public-sector cancer centres, primarily focusing on generic and biosimilar options. The private sector has the autonomy to procure its cancer medicines. KEMSA has embraced several commendable practices that enhance and streamline the procurement process. Notably, the acquisition of oncology commodities is fundamentally guided by the national Essential Medicines List (EML), prioritised items from the Ministry of Health (MOH) (Health Products and Technologies), and projected demand.

Access to specific essential oncology medicines, whether on-patent or off-patent, is facilitated through negotiated arrangements with the manufacturers of these treatments. Notable examples include Imatinib for chronic myeloid leukemia and gastrointestinal stromal tumours (GIST), Trastuzumab (Herceptin) for HER2-positive breast cancer, and Letrozole for advanced breast cancer. However, due to various factors, including affordability, and constraints in public financial management, the availability of



these essential products is limited, which poses challenges for many eligible patients seeking these therapies.

The strategic purchasing of oncology products in Kenya faces several challenges that require careful consideration and collaborative solutions. These include:

- the affordability of essential oncology medicines;
- regulatory frameworks that may not always ensure the highest quality products;
- the product registration process, which can be cumbersome and time-consuming;
- complexities within procurement processes that may hinder efficiency;
- extended lead times during procurement that can affect timely access to medications;
- limited collaboration and engagement among stakeholders, which may restrict opportunities for negotiated access arrangements;
- the need for more adequate and consistent financing for oncology commodities to support improved healthcare outcomes.

Addressing these challenges collaboratively will enhance patient access to vital oncology treatments.



Table 1: Kenya Good Practices: Cancer Medicines Inclusion in UHC

Pooled public financing mechanisms	Kenya has established the SHIF under the new SHA, with mandatory enrolment for all Kenyans and contributions from formal and informal workers. The government subsidises contributions for vulnerable groups to ensure access to essential health services. Pooled funding like SHIF with mandatory enrolment is a good practice in financing complex treatments like cancer since it includes a large population pool, increasing the fund's ability to fund cancer care sustainably.
Oncology prioritisation in UHC	The National Cancer Control Plan (NCCP) (2023 – 2027) includes an entire section on financing, and the National Health Benefits Package clearly states the inclusion of cancer in UHC, including the cost of specific packages for high-priority cancers such as breast, cervical, prostate, and oesophagus. To enhance access, the government has established a revolving fund for 21 oncology medicines.
Coverage expansion	The NHIF (now SHIF) has included cancer care coverage since 2016, even though the total payout for cancer was initially relatively low (KES 25,000 or USD 250). These amounts have steadily increased to provide more comprehensive care.
Coverage of innovative medicines under UHC	The MOH and the NHIF have negotiated access programs for innovative medicines for Human Epidermal Growth Factor Receptor 2 (HER2)-positive breast cancer and chronic myeloid leukaemia.
Strategic purchasing to address supply problems and generate savings	It's 90% of breast cancer medicines and 60% of prostate cancer medicines on the WHO EML that are included on the MOH EML. The national formulary is the basis for KEMSA procurements. It is harmonised with standard treatment guidelines at the national and country levels. Most of the medicines procured by KEMSA are generic and purchased through competitive procurement, providing opportunities for price reductions.



Table 2: Kenya: Gaps in Cancer Medicines Inclusion in UHC

Late detection and poor outcomes of cancer care	Most patients present at an advanced stage. In 2021, 38.2% of registered cancers for all sites were at stages I and II, 38.6% were at stages III and IV, and the stage was not reported in the remaining cases. Late detection places a heavy disease burden on society and increases the cost to the government.
Lack of inclusion of diagnostic tests in UHC	The cancer package does not cover diagnostics required for cancer diagnosis and genetic tests needed to select relevant cancer medicines.
Variable access to innovative medicines	Access arrangements for specific medicines, such as those for breast cancer, have limited geographic coverage, given the limited eligible facilities and cancer centres available in the country.
Insufficient and unpredictable cancer financing	Inadequate financing of oncology services, coupled with inconsistent and delayed disbursements to KEMSA, Counties, and Cancer Centres, deters the central procurement authority from efficiently procuring and distributing oncology commodities.
Affordability of cancer commodities	The affordability of cancer commodities – largely driven by market dynamics and hence a high dependence on imports—hinders universal access to cancer commodities.
Limited strategic access collaborations	Limited multistakeholder engagements and negotiations between critical stakeholders, i.e., the MOH, KEMSA, the Ministry of Finance (MOF), and drug manufacturers, hinder establishing and enforcing negotiated access arrangements that would further lower care costs and enhance access to critical commodities.



Conclusions and Recommendations

The cancer care landscape in Kenya presents various challenges that warrant attention and collaborative efforts. These include diagnosis delays, the need for enhanced standardisation in reporting practices, limited diagnostic capacities, and a shortage of specialised healthcare professionals. Furthermore, these issues are intertwined with the broader health financing environment, where government health budget allocations currently fall short of recommended guidelines and are significantly supplemented by out-of-pocket payments and donor contributions. Addressing these challenges will require a concerted approach from all healthcare delivery and policy stakeholders.

Through the MOH and NHIF, the government has made efforts to improve access to cancer care, including medicines, by developing beneficiary entitlements. However, coverage varies among NHIF schemes, leading to significant OOP for cancer care, especially in non-comprehensive facilities. The new health reforms aim to consolidate schemes and address inequities in cancer coverage.

Strengthening public financial management, increasing investments in cancer prevention and treatment, and refining benefit design for more significant equity are crucial to enhancing cancer care financing and accessibility in Kenya. Implementing strategic purchasing for oncology commodities is also essential. Addressing these areas can lead to a more equitable cancer care system, reducing patient financial burdens and improving health outcomes. Achieving these goals requires collaboration among national and county governments, the private sector, and international partners.



Country Information, Findings and Analysis

Cancer Burden

Breast, cervical, prostate, oesophageal, and colorectal cancers lead in incidence in Kenya. Among females, the cancers with the highest incidence include breast (25.5%), cervical (20.6%), oesophageal (6.1%), colorectal (5.6%) and ovarian (4.4%). Among males, the cancers with the highest incidence rates include prostate (21.9%), oesophageal (9.9%), colorectal (9.1%), stomach (5.4%), and non-Hodgkins lymphoma (5.3%).⁹

Breast cancer: Breast cancer is the most common cancer in the country, making up 16.2% of all new cases and having the highest cumulative risk at 4.5. It accounts for about 12% of cancer deaths, with a 5-year prevalence of 66.1 per 100,000 population. Comparatively, in SSA, it represents 15.7% of new cancers, a cumulative risk of 3.9, and accounts for 12.2% of cancer deaths, with a 5-year prevalence of 54.5 per 100,000. In Kenya, the highest cases are reported in Nairobi, Nakuru, and Nyeri counties.

Prostate cancer: Prostate cancer is the most prevalent cancer among Kenyan men, making up 8% of all cancer cases. It has a cumulative risk of 4.2 and accounts for 22% of male cancers, resulting in 7% of cancer-related deaths. The 5-year prevalence is 24.6 per 100,000 population. Comparatively, in SSA, prostate cancer constitutes 10.2% of new cancers, with a cumulative risk of 4.4 and a prevalence of 27.4 per 100,000. The highest cases in Kenya are reported in Nairobi, Machakos, and Nakuru counties.

Mortality rates: According to the Kenya Mortality and Cause of Death Report 2012–2021, the leading cancer deaths were related to cancer of the oesophagus, which accounted for 15.6% of deaths, followed by cervix uteri cancer at 10.4%, breast cancer at 9.6% and liver cancer at 9.1%.¹⁰

Cancer stage at diagnosis: The disease stage at diagnosis significantly impacts care and treatment outcomes. The National Cancer Registry indicates that about 47% of cancer cases in both sexes are diagnosed at advanced stages (III and IV). Females are more likely to be diagnosed early (16.2%) than

⁹ <https://gco.iarc.who.int/media/globocan/factsheets/populations/404-kenya-fact-sheet.pdf>

¹⁰ Kenya Mortality and Cause of Death Report 2012–2021



males (10.4%). Additionally, a higher proportion of males (43.5%) were diagnosed with an uncertain stage due to insufficient clinical data compared to females (36.8%). This discrepancy is linked to limited diagnostic capacity and inconsistent documentation in medical records, affecting cancer registry data accuracy.

Cancer diagnosis: The diagnosis of cancer is confirmed through histopathology and cytology. The Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB) regulates laboratory standards. As of 2023, Kenya has 1,248 facilities for cancer tissue processing, primarily in Nairobi (30%), with others in Kiambu (8%), Mombasa (6%), and Nakuru (4%). However, some regions, like Mandera and Tana River, only have one facility each. Service delivery is often affected by shortages of reagents and personnel and a lack of standardisation in cancer diagnosis.

Cancer treatment: Cancer treatment in Kenya requires a multidisciplinary team and is offered in specialised centres categorised as follows:

- Essential: provides at least one type of oncology care (e.g., chemotherapy or surgery)
- Middle-Level Cancer Centre: offers two or more treatment modalities
- Comprehensive Cancer Centre: delivers highly specialised services, including PET scans and cancer research.

According to the National Guidelines for the Establishment of Cancer Centres, treatment is provided by designated facilities varying in ownership: 74% private, 16% public, and 10% faith-based. Government facilities include three tertiary public hospitals, three comprehensive county referral centres, eight chemotherapy county referral centres, and other private and faith-based institutions.

In collaboration with stakeholders, the MOH has developed Cancer Screening and Treatment Guidelines for Kenya's common childhood and adult cancer typologies. These guidelines provide a yardstick for standardised, evidence-based screening and treatment of cancer in the country.



Health Financing Context

Public Finance Context

The overall fiscal context for increasing health financing in Kenya is challenging. Despite the growing economy, the tax-to-GDP ratio declined from 16% to 13% between 2017 and 2022. This was below the regional 15% threshold for adequacy of financing public services. Further, the debt-to-GDP ratio increased from 57% to 68% during the period of interest, breaching the East African Community (EAC) regional threshold of 50% for debt sustainability and adequacy of financing public services beyond debt repayment.¹¹

Highlight

The rising debt levels in Kenya beyond the regional threshold highlights potential risk of debt repayments crowding out expenditures on other essential public services including health and immunisation. Coupled to the declining tax revenues, these further reduce the fiscal space for health and cancer care. A strengthened tax administration in Kenya would help mobilize more resources for public goods such as health and cancer care.

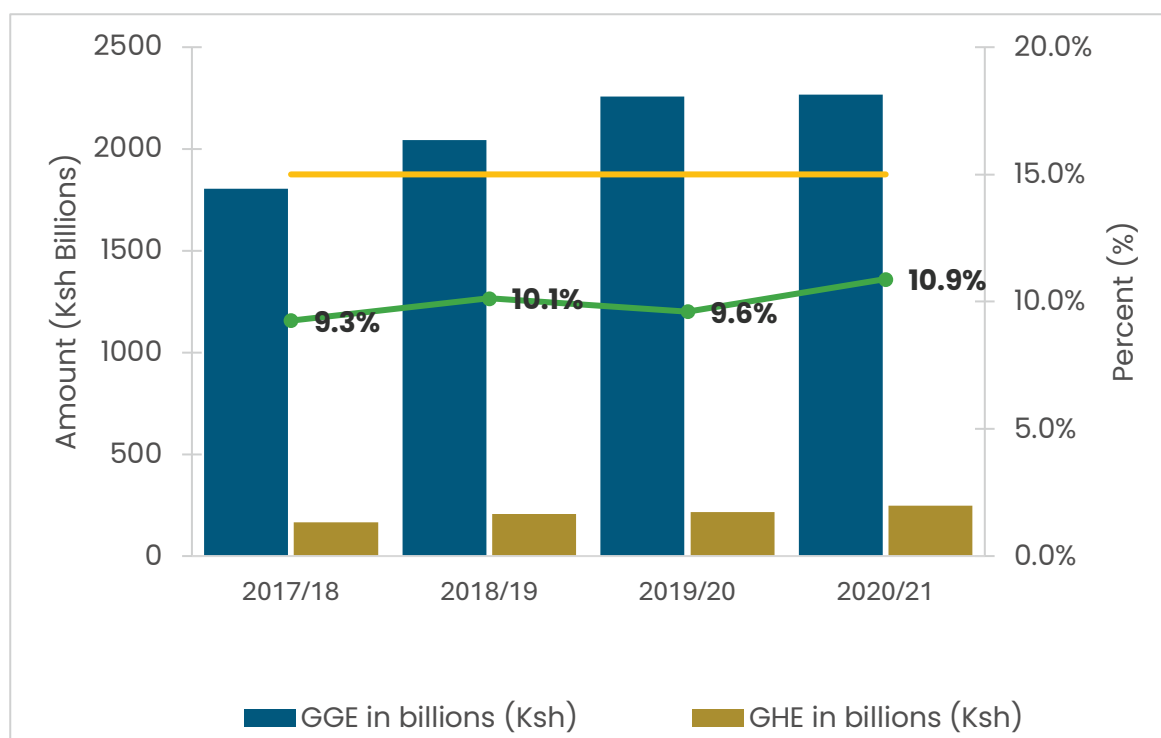
Prioritisation of health in public financing: Between 2018 and 2021, Kenya allocated 9.3% to 11% of government health budgets at national and county levels (Figure 2). In 2022, this dropped to 9%, reflecting a global trend of reduced health spending post-COVID-19. Kenya's health prioritisation is comparable to Rwanda's (9%) and higher than that of neighbouring countries like Tanzania and Uganda, which spend around 5% of their government expenditures on health.¹²

¹¹ Source: GOK Budget Reports, MTEF, KRA Annual Reports, Analysis by Consultant

¹² WHO. Global Health Expenditure Database, WHO, Geneva. Global Health Expenditure Database



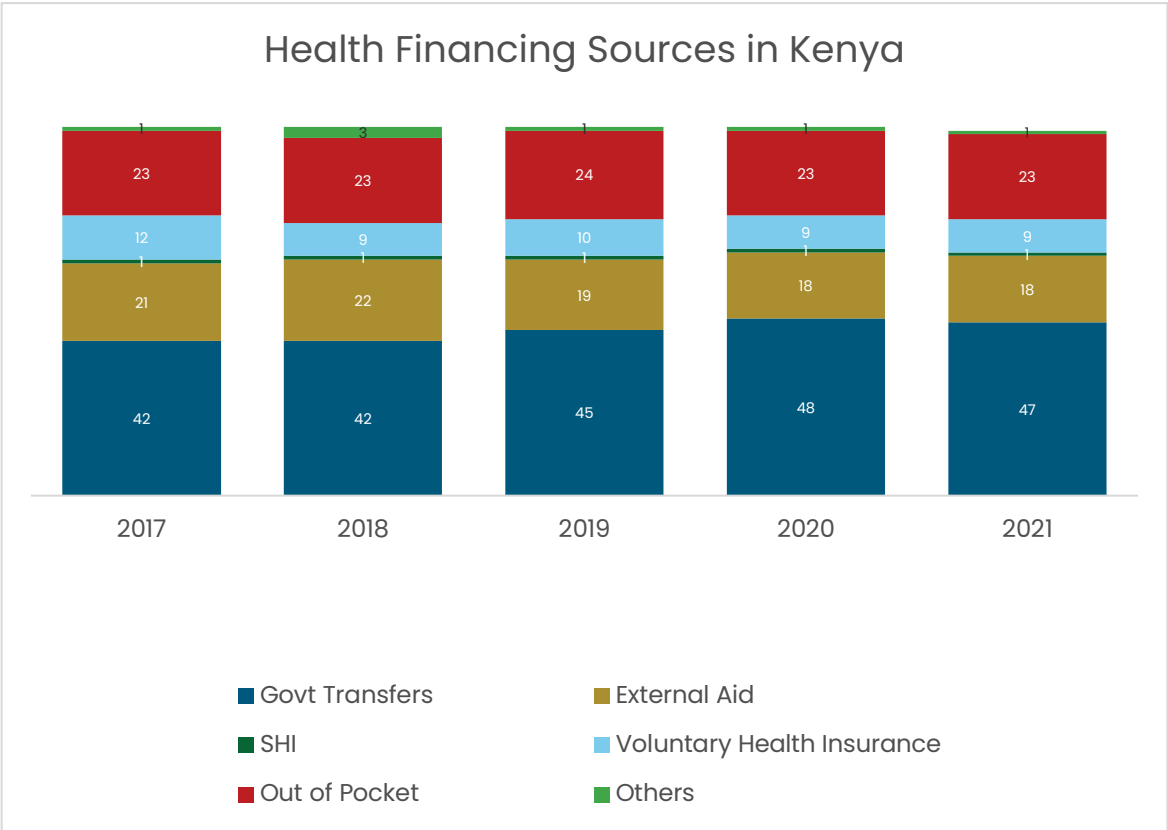
Figure 2: Health Sector Allocation against Total Government Expenditure



Source: GOK Budget Reports, MTEF, Analysis by Consultant

Government funding was the most significant source of financing for health in Kenya. This accounted for 47% of all health financing. This was followed by OOP (23%), donor funding (18%) and health insurance (<2%) during the period of analysis (Figure 3).

Figure 3: Breakdown of Health Financing Sources in Kenya: 2017 – 2021



Source: WHO Global Health Expenditure Database and World Bank Data, Analysis by Consultant



Highlight

The high OOP payments (>15%) pose a significant risk of financial hardship among the population as they seek for care. Strengthening pooling mechanisms in Kenya would help reduce OOPs.

Though declining, the dependence on donor funding limits the transition to domestic financing of health and cancer care and further threatens sustainability of oncology services.

Increased government allocations are therefore essential to guarantee sustainability of health services, including oncology services.

‘So, the main issue is around the resources and sustainability when it comes to financing. Because... we are aware it's needed. Yes, we are aware that is where we are likely to have significant catastrophic expenditure, but the current financing mechanism does not raise adequate resources to be able to finance that. That's one of the reasons why there is a proposal to have an emergency, chronic and critical illness fund financed by treasury or through the exchequer or tax based...’

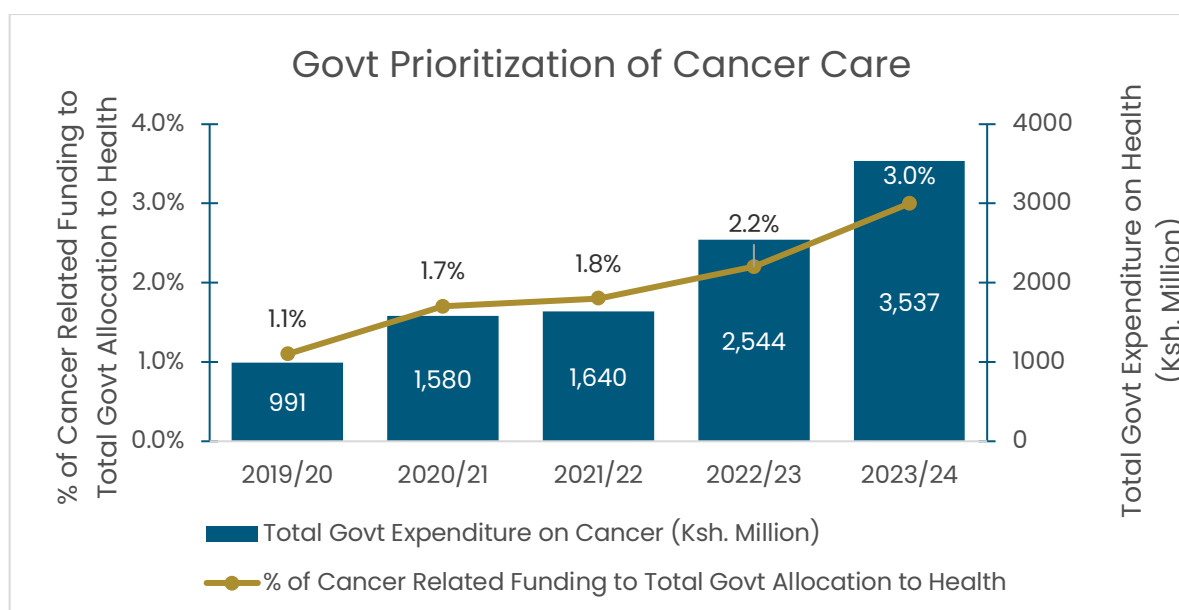
SHA Stakeholder



Cancer care budgets

Government allocations to cancer care have progressively increased from KES 1 billion to 3 billion – about 1.1% to 3% of the MOH budgets between 2019/2020 and 2023/2024 (Figure 4). This translated to less than 0.1% of the national budget over the years of analysis.

Figure 4: National Government Prioritisation of Cancer Care



Source: MTEF, Programme Based Budgets, Budget Policy Statements, Analysis by Consultant

Notably, there was limited budget decomposition to reflect the different interventions in cancer care except for infrastructure development, research, and human resource-related spending. Most of the trackable allocations to cancer were towards establishing cancer centres across the counties.

Cancer care entitlements: Without a formal Health Technology Assessment Unit, the NHIF used a participatory approach with multi-criteria decision analysis (MCDA) to develop beneficiary entitlements. In collaboration with the MOH, the fund has established 12 criteria for benefits inclusion: the first seven are intervention-specific, while the last five are system-oriented (Figures 5 and 6).



Figure 5: Intervention Specific Criteria

Benefits Inclusion/ Prioritisation Criteria		
No	Criteria	Description
1	Effectiveness and safety of clinical intervention	Interventions globally acceptable as effective and safe in prevention and treatment/management of morbidity and mortality at person or population level
2	Equity across population stratifiers	Benefits that afford all people a fair chance at a healthy life; interventions focusing on certain social groups may have reduced priority
3	Burden/cost of disease (ABC)	Focus on high burden of disease among beneficiaries or highest cost healthcare or risk of catastrophic expenditure; A (80%) > B (15%) > C (5%)
4	Severity of disease (VEN)	Focus on the most severe conditions (life-threatening, debilitating) in order Vital > Essential > Non-essential
5	Actual and perceived quality of care	Interventions responsive according to evaluated and validated beneficiary expectations of quality of care
6	Cost of healthcare: catastrophic health expenditure	Interventions responsible for greatest burden of healthcare financing or catastrophic expenditure at population and individual levels
7	Cost-effectiveness and sustainable financing	Interventions that maximise population health outcomes within limited resources and sustainable financing in the medium and long term; allocation per group based on sustainable medical-loss ratio

Source: NHIF Benefits Review Working Document (2019)



Figure 6: System Specific Inclusion Criteria

The Healthcare Meso and Macro environment is able to sustain the implementation of the NHIF benefits without compromise of quality of service or additional and unnecessary expenditure on the fund.		
No	Criteria	Description
8	Service capacity requirements	Easy to implement interventions given current in-country health service capacity: availability of service, infrastructure, HRH, service delivery models, quality management
9	Health information and system requirements	Easy to implement interventions within current health information system capacity and monitoring and evaluation indicators
10	Medicines/commodities and health technology requirements	Interventions that are possible/easy to implement due to existing registration and availability of (non-)medical products, vaccines and technology capacity
11	Global, regional, country and ministry's health sector priorities	Interventions aligned with existing and projected global and national health sector priorities
12	Socio-cultural and legal acceptability	Interventions socially and culturally acceptable to the Kenyan population and minimise litigation risk

Source: NHIF Benefits Review Working Document (2019)

The fund has prioritized the following cancers in collaboration with the MOH and Kenya Society of Haematology and Oncology (KESHO):

- **Childhood Cancers:** Acute lymphoblastic leukaemia, Burkitt's lymphoma, Wilm's tumour, Hodgkin's lymphoma, retinoblastoma, and low-grade gliomas
- **Adult Cancers:** Gynaecological, breast, urological, head and neck, gastrointestinal, adult haematological, brain, and lung cancers.



‘...we have had a document that outlines a prioritisation criteria because, at the end of the day, the fact is that we cannot afford everything... the resources that we are able to raise are not able to cover everything. Therefore, there has to be a strong aspect around what the population needs the most so that we focus on that. Or we look at having it get more it when it comes to financing...’

SHA Stakeholder

‘We had sessions in 2021 with KESHO, that is, the association of oncologists or oncology practitioners in the country....and we have (developed) two working documents which are differentiated care models for the most common cancers in the country. So, for paediatrics, we have 93% of the cancers while for the adults, we have 92% of the cancers...’

SHA Stakeholder



Schemes under NHIF

National Scheme: Kenyans aged 18 and above can register for NHIF membership through employment or voluntary enrolment. Members can choose single or family plans for themselves, their declared spouse, and children under 18. NHIF does not check for pre-existing conditions. Voluntary contributors pay KES 500 monthly (USD 3.86) while statutory contributions are based on a graduated scale.

Enhanced Scheme: The Enhanced Scheme is a comprehensive coverage agreement between a procuring entity and NHIF that upgrades the National Scheme. Beneficiaries include civil servants, the national police and prison service, county governments, parastatals, pension Schemes for retired public officers, water and sewerage companies, and public universities.

Linda Mama: Linda Mama is the government's free maternity program, which NHIF manages. It offers prenatal and postnatal clinics and delivery services (normal and caesarean) at NHIF-contracted health care providers.

Edu Afya: Edu Afya is a medical scheme for public secondary students registered under the National Education Management Information System (NEMIS) and enrolled with NHIF.

Health Insurance Subsidy Programme (HISP): This state-sponsored subsidy programme covers the country's poor and indigent.

Older Persons with Severe Disability (OPSD): This state-sponsored programme covers elderly people with age-related disabilities.

Table 3 summarises the populations covered by the respective schemes under NHIF between 2018/2019 and 2022/2023.



Table 3: Populations Covered per NHIF Scheme per year.

Scheme	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
National Scheme	3,755,519	5,359,501	5,325,744	5,052,877	5,758,259
Edu Afya	2,700,000	2,700,000	2,900,000	3,100,000	3,500,000
Civil Servants	138,357	133,589	139,611	139,611	136,095
National Police Service		131,162	130,514	130,514	131,796
County Governments	35,125	36,548	51,216	52,136	55,276
Parastatals	16,245	18,224	16,986	21,791	20,451
Retirees	1,001	1,112	1,400	1,514	1,613

Source: NHIF Reports, Analysis by Consultant

‘...one of the key considerations for cancer care was that we needed to finance treatment plans as opposed to financing sessions because the data was indicating that a number of patients were not able to meet the OOP. Therefore, even that amount which we were spending in those sessions of treatment...they will not get much in terms of clinical outcomes (because they were inadequate).’

SHA Stakeholder

While the intention remains comprehensive treatment based on care protocol, the depth of coverage varies across the different schemes under NHIF. The entitlements in the Enhanced Schemes are tailored to the care protocol, whilst the entitlements in the National Scheme are limited per cycle up to the set cover limits as in Table 4 below:



Table 4: Scope of NHIF Cancer Entitlements under the National Scheme

Scope	Description
Diagnosis	Positron Emission Tomography (PET Scans): KES 50,000/=
	CT scan for treatment planning: KES 6,000/=
	MRI, CT scans, ECHO and ECG, Mammogram, Bone Scans
Treatment	Chemotherapy
	Basic: Up to 6 sessions at KES 25,000/= per session
	Complex Chemotherapy: Up to 6 sessions at KES 100,000/= per session
	Radiotherapy: 20 sessions at KES 3,600/= per session
	Brachytherapy: 2 sessions at KES 40,000/= per session
	Stereotactic Body Radiation Therapy (SBRT): 5 sessions at KES 350,000/=
	Surgical Procedures
Screening	Limited to the Enhanced Schemes but not provided under the National or sponsored schemes

Source: NHIF Reports, Analysis by Consultant

Note: The session limits do not apply to the Enhanced Schemes but are limited to the National and sponsored Schemes.

Prostate cancer coverage: The average payouts for Prostate Cancer care were highest among the Enhanced Schemes and lowest in the National Scheme. While the average payout for prostate cancer claims was KES 28,000, the payout for the National Scheme was below the average at KES 26,000, the highest among the retirees (KES 65,000) and national police service (KES 62,000), as in Figure 7.

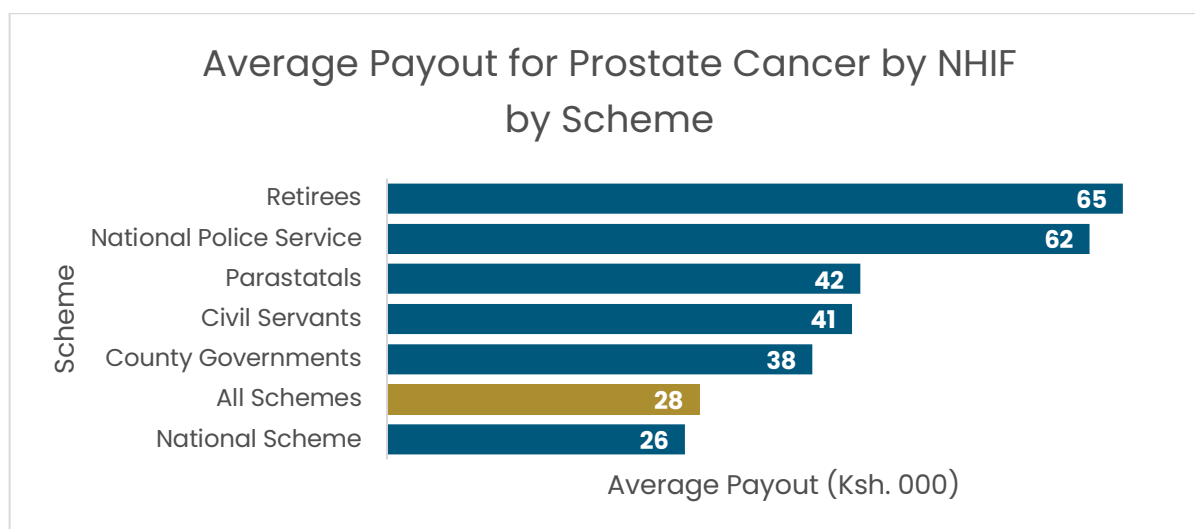
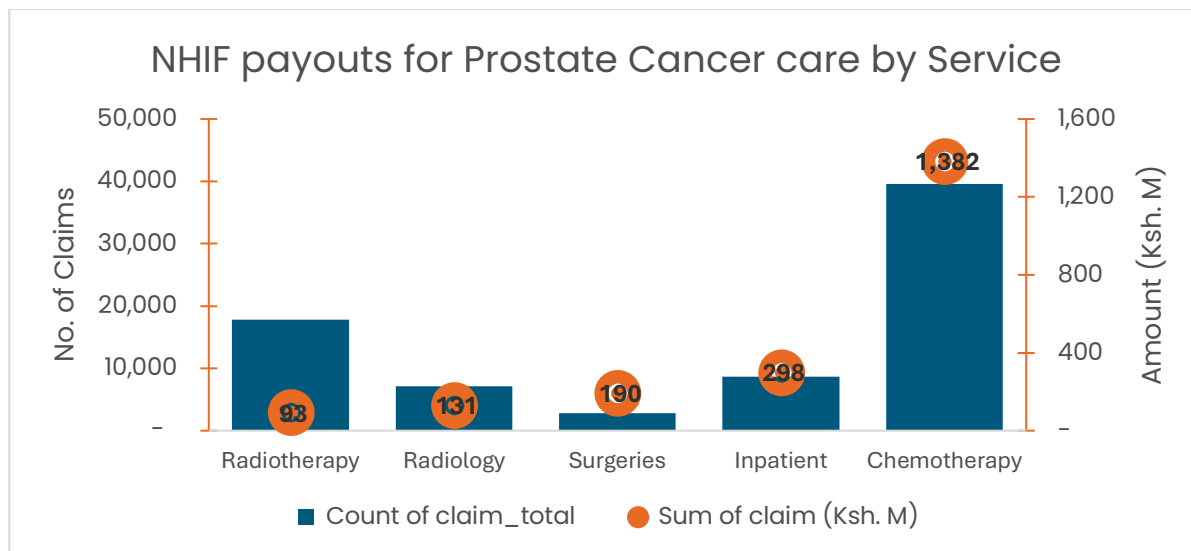
Figure 7: Average Payout for Prostate Cancer by NHIF Scheme

Figure 7: Average Prostate Cancer Payouts by Schemes | Source: NHIF Database, Analysis by Consultant



Prostate cancer payouts by service: The majority of the payouts for prostate cancer care were for chemotherapy. This accounted for KES 1.4B (66% of payouts), KES 0.3B (14%) for inpatient care, KES 0.2B (9%) for surgeries, KES 0.13B (6%) for imaging, and KES 0.1B (4%) for radiotherapy, as in Figure 8.

Figure 8: NHIF Payouts by Type of Service

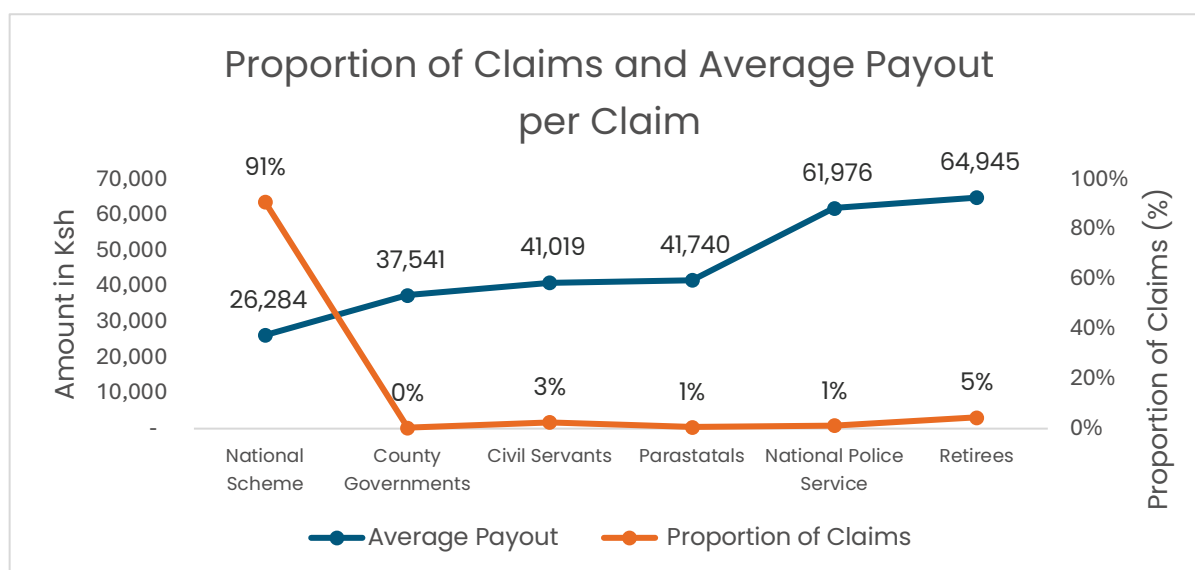


Source: NHIF Database, Analysis by Consultant

Notably, there is an inequitable depth of coverage for prostate cancer across the schemes, with a bias in favour of the Enhanced Schemes. While the National Scheme had 91% of all the cases, it had the lowest average payment per claim (KES 26,000), whereas the Retirees' Scheme accounted for 5% of all claims and received the highest average payout per claim at about KES 65,000, more than double that of the National Scheme (Figure 9).



Figure 9: Average Prostate Cancer Payouts vs Proportion of Claims

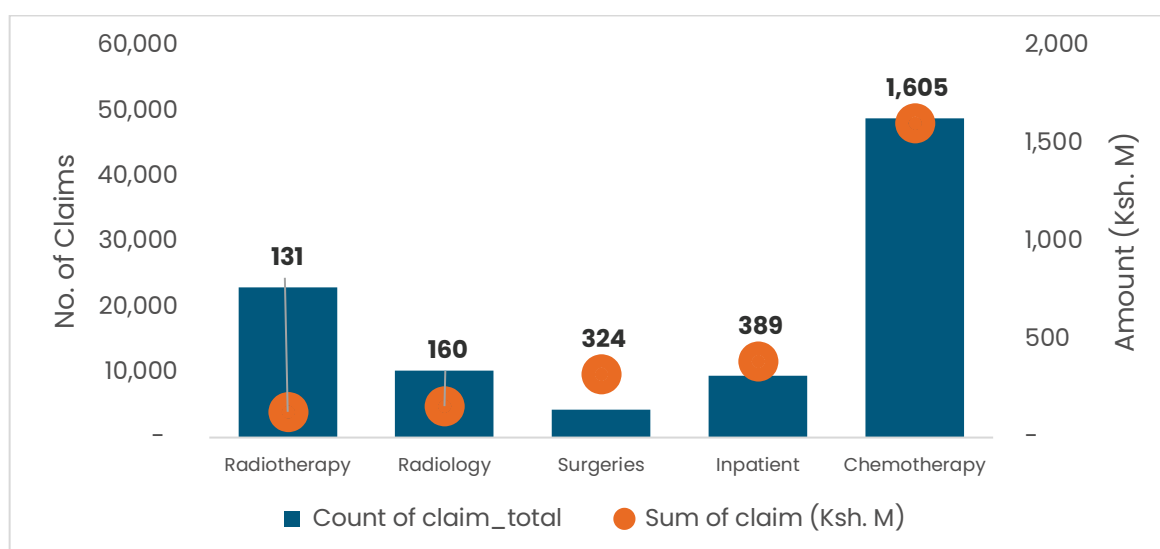


Source: NHIF Database, Analysis by Consultant

Breast cancer coverage: Breast Cancer claims covered by NHIF progressively increased from KES 0.3B to KES 0.9B from 2018/2019 to 2022/2023, a cumulative of KES 2.7 B.

Breast cancer payouts by service: Most breast cancer payouts were for chemotherapy at KES 1.6B (61%), followed by inpatient care at KES 0.4B (15%), surgeries at KES 0.3B (12%), radiology at KES 0.2B (6%), and radiotherapy at KES 0.13B (5%).

Figure 10: Breast Cancer Payouts by Service

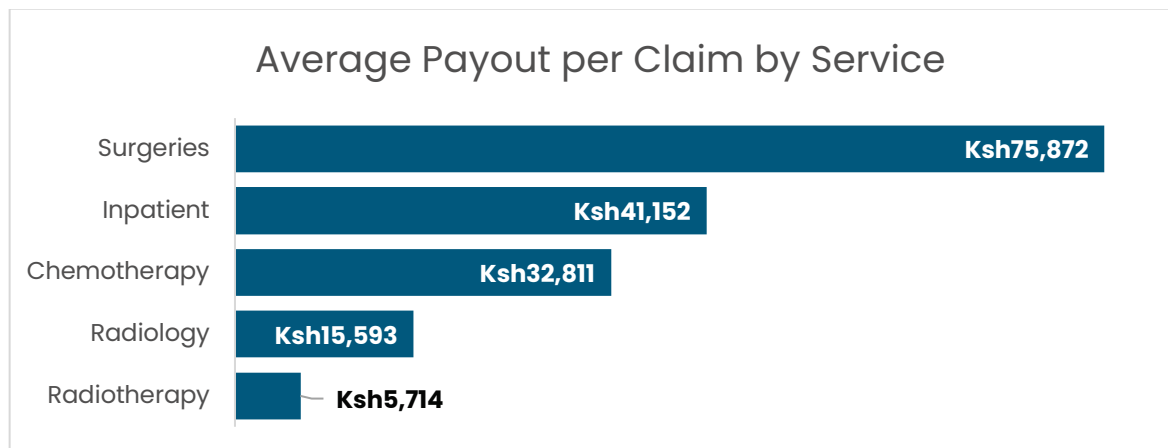


Source: NHIF Database, Analysis by Consultant



Surgeries had the highest average payouts for breast cancer services at KES 76,000, while radiotherapy had the lowest at KES 6,000. Other payouts included KES 41,000 for inpatient care, KES 33,000 for chemotherapy and KES 16,000 for radiology.

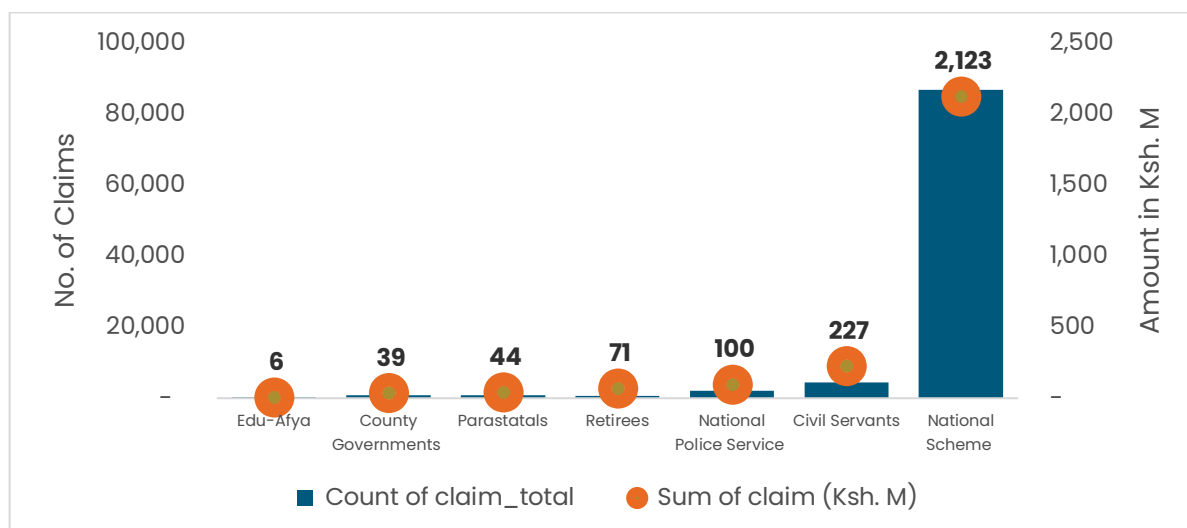
Figure 11: Average Breast Cancer Claims Payout by Service



Source: NHIF Database, Analysis by Consultant

Breast cancer payouts by scheme: Most breast cancer care payments went to National Scheme beneficiaries, totalling KES 2.1B (81% of all payouts). In contrast, the Edu Afya scheme had the fewest claims at KES 6M (0.2% of total payouts).

Figure 12: Breast Cancer Claims per Scheme



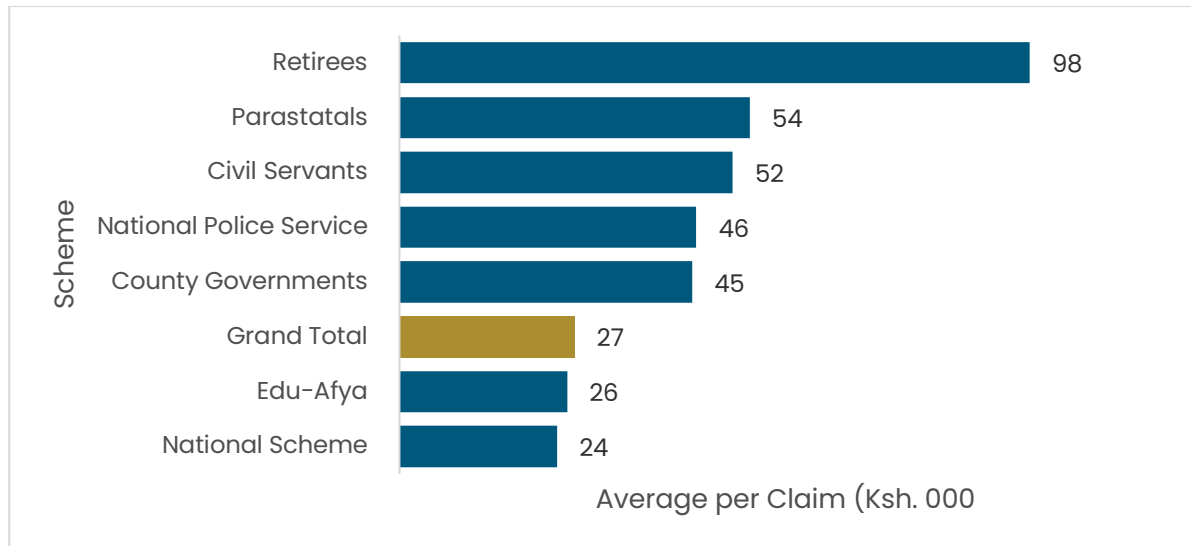
Source: NHIF Database, Analysis by Consultant

There is a significant disparity in breast cancer coverage among the schemes, favouring the Enhanced ones. The National Scheme handled 90% of



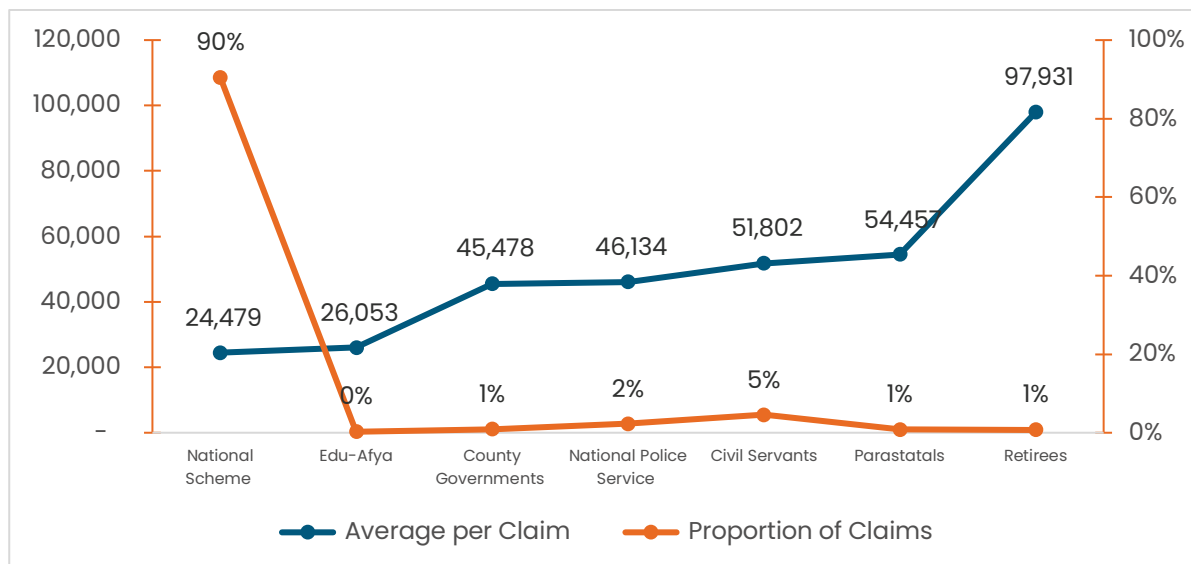
cases but had the lowest average payment per claim (KES 24,000). In contrast, the Retirees' Scheme, with only 0.8% of claims, had the highest average payout at approximately KES 98,000, over four times that of the National Scheme.

Figure 13: Average Breast Cancer Payouts by Scheme



Source: NHIF Database, Analysis by Consultant

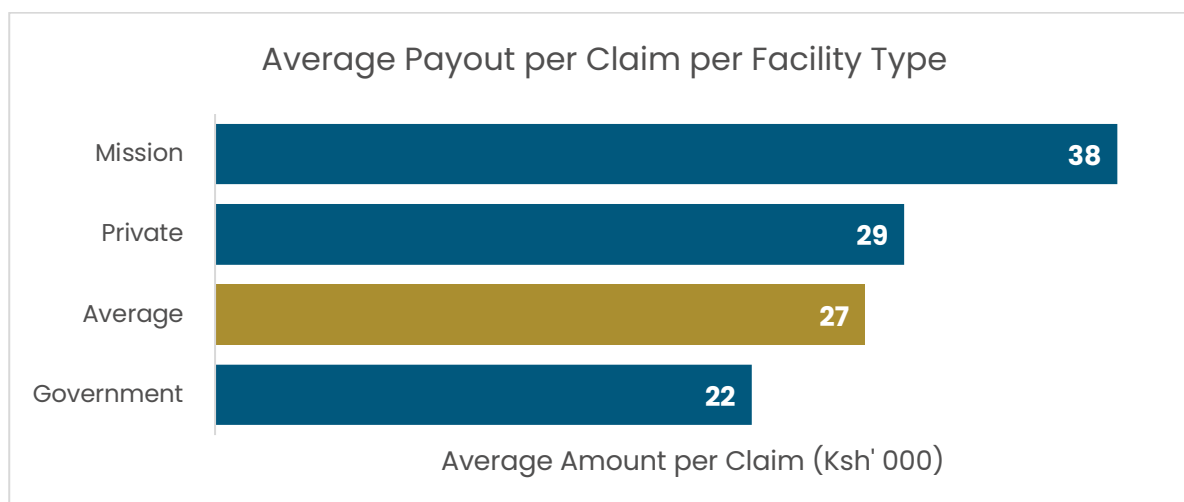
Figure 14: Average Breast Cancer Payouts vs Proportion of Claims



Source: NHIF Database, Analysis by Consultant



Figure 15: Average Breast Cancer Payouts by Facility Ownership



Source: NHIF Database, Analysis by Consultant

OOP

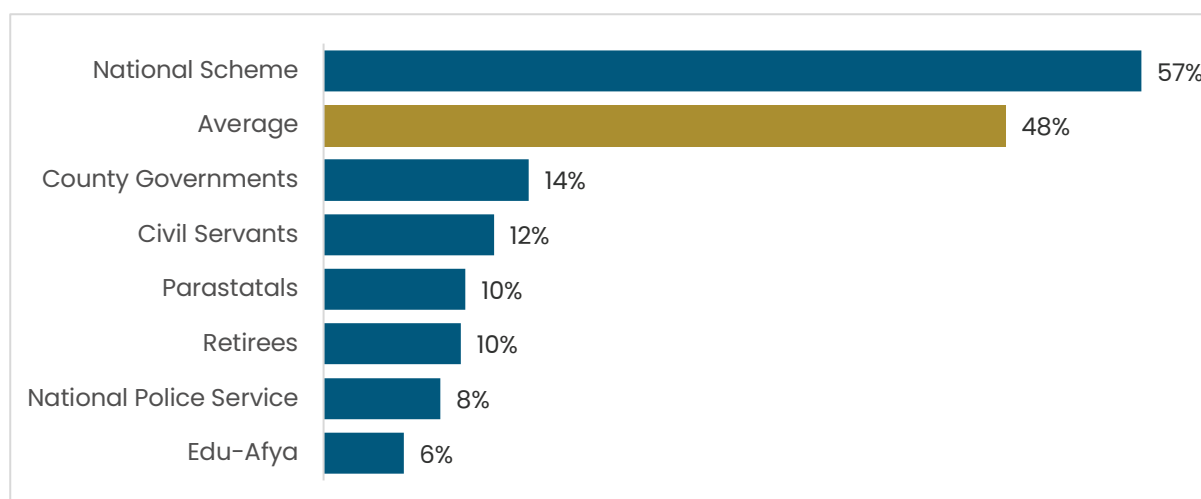
NHIF primarily addresses curative cancer care but excludes essential diagnostic and preventive services like screening and laboratory tests, vital for early detection. This gap can delay patients' understanding of their cancer status. Furthermore, the NHIF cancer care package lacks palliative services, psychosocial counselling, and advanced therapies such as monoclonal antibodies, biologics, and personalized medicine. The NHIF covers only a portion of cancer care costs, leaving patients with out-of-pocket expenses. For example, if a patient needs 33 radiotherapy sessions, NHIF only covers 20, forcing the patient to pay for the remaining sessions or delay treatment until the next financial period.

Estimated OOP by scheme

Patients seeking cancer care under non-comprehensive NHIF contracts had to cover an average of 48% of treatment costs from other sources, primarily OOP. The unpaid proportion was the highest at 57% under the National Scheme, significantly more than Enhanced Schemes, which were as follows: county governments (14%), civil servants (12%), parastatals and retirees (10%), national police service (8%) and Edu Afya (6%).



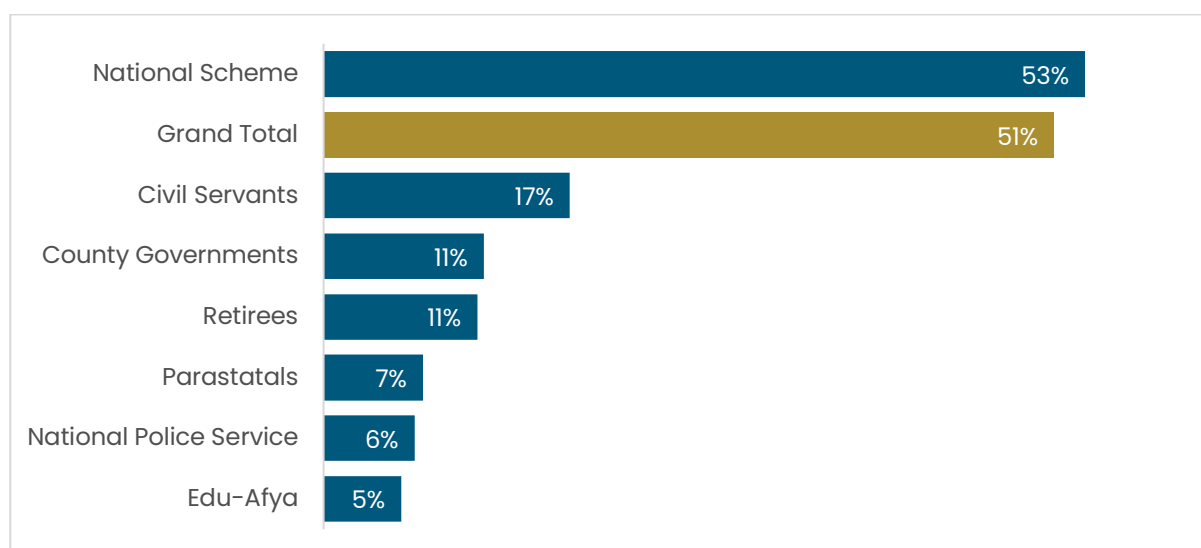
Figure 16: Estimated Cancer OOP by Scheme



Source: NHIF Database, Analysis by Consultant

Due to NHIF's non-comprehensive contracts, patients had to cover an average of 51% of treatment costs from alternative sources in prostate cancer care. The highest unpaid proportions were under the National Scheme, at 53%. In comparison, Enhanced Schemes had lower rates: civil servants (17%), county governments and retirees (11%), parastatals (7%), national police service (6%), and Edu Afya (5%).

Figure 17: Estimated Prostate Cancer OOP by Scheme

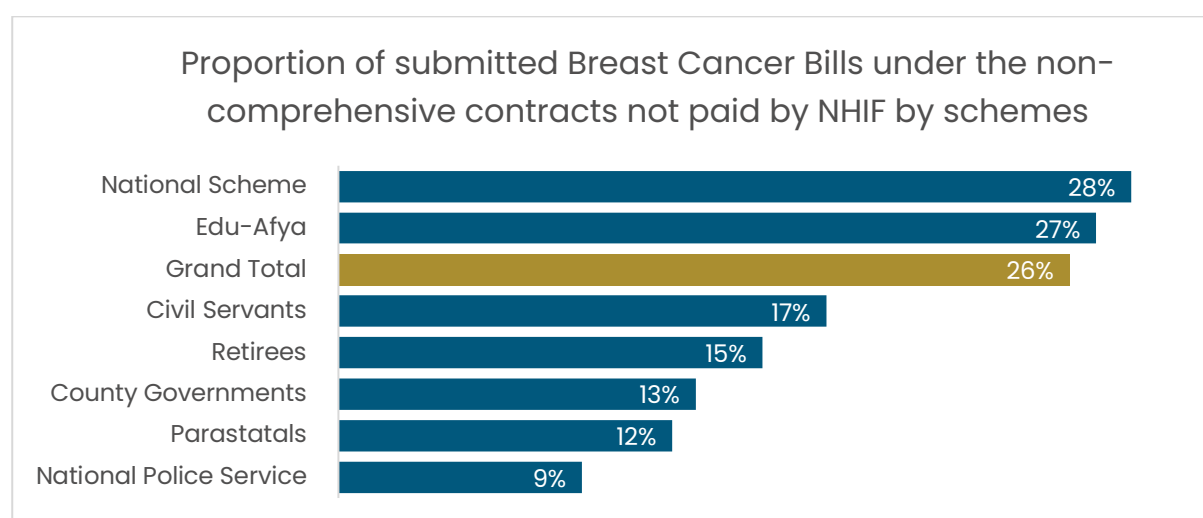


Source: NHIF Database, Analysis by Consultant



Further, for breast cancer care, patients had to meet up to an average of 26% of the treatment costs from alternative sources as these were not covered by NHIF in the non-comprehensive contracts. The unpaid proportions were highest under the National Scheme at 28% and Edu Afya (27%) and lowest in the Enhanced Schemes- civil servants (17%), retirees (15%), county governments (13%), parastatals (12%), and national police service (9%), as in Figure 18.

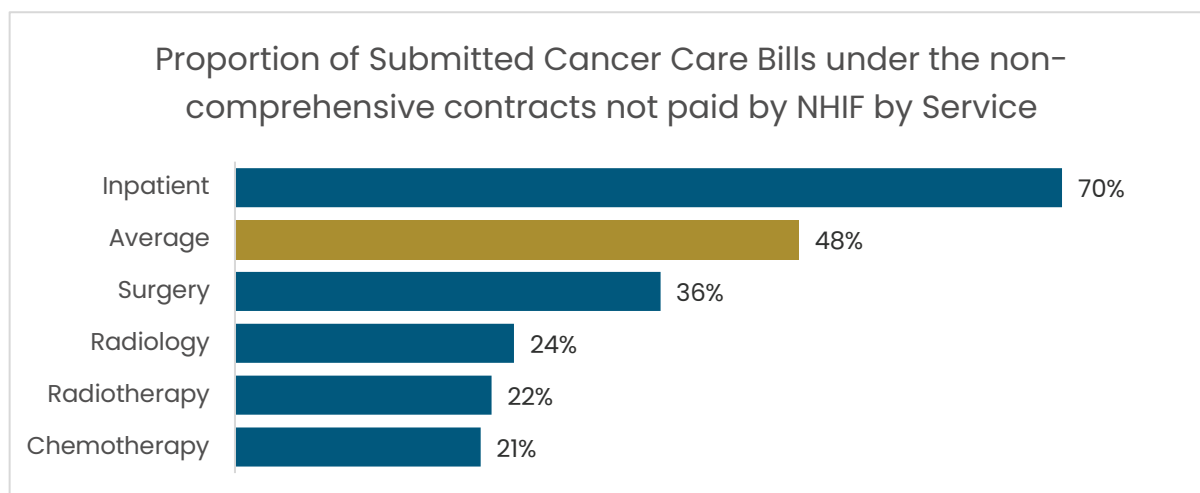
Figure 18: Estimated Breast Cancer OOP by Scheme



Source: NHIF Database, Analysis by Consultant

Estimated OOP by service: The highest unpaid proportions for cancer care services in non-comprehensive contracts were for inpatient services (70%), followed by surgeries (36%), radiology (24%), radiotherapy (22%), and chemotherapy (21%).

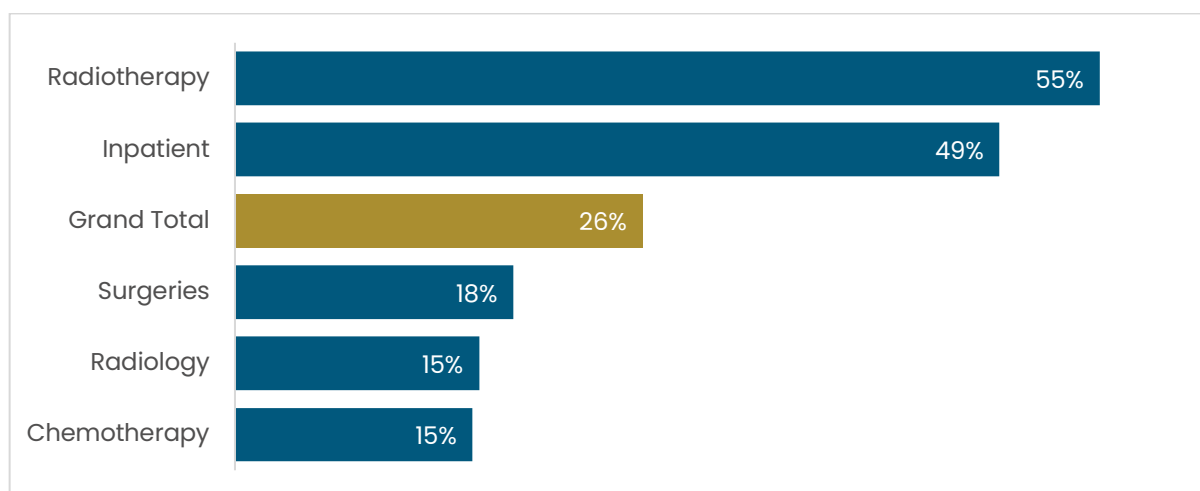
Figure 19: Estimated Breast Cancer OOP by Service



Source: NHIF Database, Analysis by Consultant

Against an average of 26%, the highest unpaid proportions for breast cancer care services in non-comprehensive contracts were radiotherapy services (55%), followed by inpatient services (49%), surgeries (18%), radiology (15%) and chemotherapy (15%).

Figure 20: Estimated Breast Cancer OOP by Service

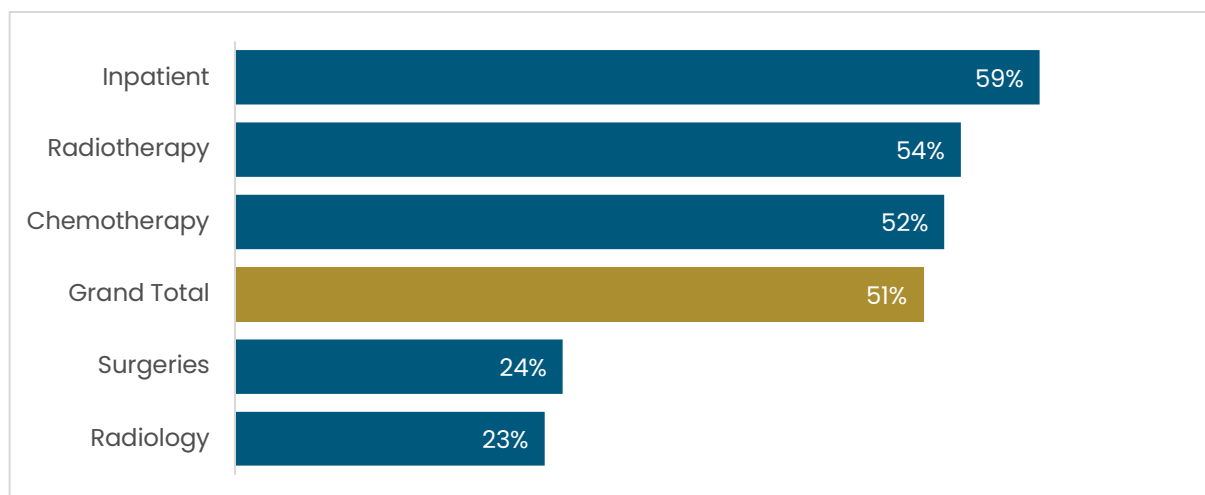


Source: NHIF Database, Analysis by Consultant

Against an average of 51%, the highest unpaid proportions for prostate cancer care services in non-comprehensive contracts were under inpatient services (59%), followed by radiotherapy services (54%), chemotherapy (52%), surgeries (24%), and radiology (23%). See Figure 21.



Figure 21: Estimated Prostate Cancer OOP by Service



Source: NHIF Database, Analysis by Consultant

Purchasing Of Cancer Commodities

Determinants of KEMSA's procurement of oncology commodities: KEMSA's procurement of oncology commodities is guided by the national EML, prioritized by the MOH, and based on forecasted needs derived from internal logistics management information system procurement statistics.



‘Any product that is outside Kenya Essential Medicines List we don't procure, because that is what guides us’

KEMSA Stakeholder

‘We work with the Ministry of Health. That is the Directorate of health product and technology that is responsible for policy and as well as management of health product technology. They do quantification of the need. We also have our internal demand forecasting... which is actually done using the consumption or the issue data, whatever we receive from the counties.’

KEMSA Stakeholder

‘...it is the facility that requests...we have the planning section which collates (s) all the information that comes from various facilities...’

KEMSA Stakeholder



Breast cancer commodities: Almost all the WHO-recommended essential drugs for breast cancer (12 out of 13, or 92%) except for Leuprolin are available in the KEMSA procurement list as indicated in Table 4.

Table 4: Price Inventory of Essential Drugs for Breast Cancer

Price Inventory of Essential Drugs for Breast Cancer				
Medicines WHO EML	Form and Dosage	Indication	Innovator or Generic	Median Price in KES (KEMSA)
Capecitabine (antineoplastic)	Tablet: 150 mg, 500mg	Metastatic breast cancer	Generic	12,450
Carboplatin (antineoplastic)	Injection 50mg/5mL; 150/15, 450/45, 600/60	Early-stage Breast cancer	Generic	3,000
Cyclophosphamide (antineoplastic)	Powder for injection 500mg, 1g, 2g Solid oral dosage: 25mg, 50 mg	Early-stage breast cancer, Metastatic breast cancer	Generic	200
Docetaxel (antineoplastic)	Injection: 20 mg/mL, 40mg/mL	Early-stage breast cancer, Metastatic breast cancer	Generic	2,500
Doxorubicin (antineoplastic)	Injection: 2mg/mL Powder for Injection: 10mg, 50mg	Early-stage breast cancer, Metastatic breast cancer	Generic	730
Fluorouracil (antineoplastic)	Injection: 50mg/mL	Early-stage breast cancer	Generic	1,200
Methotrexate (antineoplastic)	Conc. Injection: 1000mg/ 10mL Injection: 50mg/2mL Powder for Injection: 50mg Tablet: 2.5mg	Early-stage breast cancer	Generic	700



Price Inventory of Essential Drugs for Breast Cancer				
Medicines WHO EML	Form and Dosage	Indication	Innovator or Generic	Median Price in KES (KEMSA)
Paclitaxel (antineoplastic)	Injection: 6mg/mL	Early-stage breast cancer, Metastatic breast cancer	Generic	3,000
Vinorelbine (antineoplastic)	Capsule: 20mg, 30mg, 80mg Injection: 10mg/mL in 1mL, 5mL vial	Metastatic breast cancer	Generic	6,650
Trastuzumab *including quality-assured biosimilars (antineoplastic)	Powder for injection: 60mg, 150mg, 440mg	Early-stage and Metastatic HER2-positive breast cancer	Original	30,000–Access price from MOU with GOK
Anastrozole (hormone, antihormone) Therapeutic alternatives: 4th level ATC chemical subgroup (L02BG aromatase inhibitors)	Tablet: 1mg	Early-stage breast cancer, Metastatic breast cancer	Generic	1,000
Leuprolin (hormone, antihormone) Therapeutic alternatives: goserelin, triptorelin	Injection: 7.5mg, 22.5mg	Early-stage breast cancer	Not available	
Tamoxifen (hormone, antihormone)	Tablet: 10mg, 20mg	Early-stage breast cancer, Metastatic breast cancer	Generic	187

Source: KEMSA, Analysis by Consultant

Additionally, most of the commodities recommended as essential drugs for breast cancer are included in the national essential medicines list, the local treatment guidelines, and cancer centre drug formularies, as in Table 5. Only



Leuprolin and its congeners are not included in the local treatment guidelines. All the listed commodities are available in their generic forms in the KEMSA commodities list.



Table 5: Local Inventory of Essential Drugs for Breast Cancer

Local Inventory of Essential Drugs for Breast Cancer						
Drugs in WHO EML	Form and Dosage	Indication	Innovator or Generic	In Local Treatment Guidelines?	In Country's EML?	In Drug Formulary?
Capecitabine (antineoplastic)	Tablet: 150 mg, 500mg	Metastatic breast cancer	Generic	YES	YES	YES
Carboplatin (antineoplastic)	Injection 50mg/5mL; 150/15, 450/45, 600/60	Early-stage Breast cancer	Generic	YES	YES	YES
Cyclophosphamide (antineoplastic)	Powder for injection 500mg, 1g, 2g Solid oral dosage: 25mg, 50 mg	Early-stage breast cancer, Metastatic breast cancer	Generic	YES	YES	YES
Docetaxel (antineoplastic)	Injection: 20 mg/mL, 40 mg/mL	Early-stage breast cancer, Metastatic breast cancer	Generic	YES	YES	YES
Doxorubicin (antineoplastic)	Injection: 2mg/mL Powder for Injection: 10mg, 50mg	Early-stage breast cancer, Metastatic breast cancer	Generic	YES	YES	YES
Fluorouracil (antineoplastic)	Injection: 50mg/mL	Early-stage breast cancer	Generic	YES	YES	YES
Methotrexate (antineoplastic)	Conc. Injection: 1000mg/10mL Injection:	Early-stage breast cancer	Generic	YES	YES	YES



Local Inventory of Essential Drugs for Breast Cancer						
Drugs in WHO EML	Form and Dosage	Indication	Innovator or Generic	In Local Treatment Guidelines?	In Country's EML?	In Drug Formulary?
	50mg/2mL Powder for Injection: 50mg Tablet: 2.5mg					
Paclitaxel (antineoplastic)	Injection:6mg/mL	Early-stage breast cancer, Metastatic breast cancer	Generic	YES	YES	YES
Vinorelbine (antineoplastic)	Capsule: 20mg, 30mg, 80mg Injection: 10mg/mL in 1mL, 5mL vial	Metastatic breast cancer	Generic	YES	YES	YES
Trastuzumab *including quality-assured biosimilars (antineoplastic)	Powder for injection: 60mg, 150mg, 440mg	Early-stage and Metastatic HER2-positive breast cancer	Generic	YES	YES	YES
Anastrozole (hormone, antihormone) Therapeutic alternatives: 4th level ATC chemical subgroup (L02BG aromatase inhibitors)	Tablet: 1mg	Early-stage breast cancer, Metastatic breast cancer	Generic	YES	YES	
NALeuprolin (hormone, antihormone)	Injection: 7.5mg, 22.5mg	Early-stage breast cancer	Generic	NO	YES	YES



Local Inventory of Essential Drugs for Breast Cancer						
Drugs in WHO EML	Form and Dosage	Indication	Innovator or Generic	In Local Treatment Guidelines?	In Country's EML?	In Drug Formulary?
Therapeutic alternatives: goserelin, triptorelin						
Tamoxifen (hormone, antihormone)	Tablet: 10mg, 20mg	Early-stage breast cancer, Metastatic breast cancer	Generic	YES	YES	YES

Source: KEMSA, Analysis by Consultant

Overview of Entitlements:

- i) **A patient with HER2-negative disease would be covered only for six chemotherapy cycles, against the national guideline's recommendation of four to eight cycles, depending** on the treatment regimen. This exposes the patient to likely OOP for the balance of at least two cycles not covered by NHIF.
- ii) **A patient with HER2-positive disease** would be covered for six chemotherapy cycles and up to 18 cycles of a biologic such as Trastuzumab (Herceptin) as per the treatment guidelines, subject to availability of the biologic. The coverage for biologics is courtesy of the negotiated access agreement between the government (NHIF, MOH, KEMSA and Roche, the manufacturer). Such patients are thus shielded from incurring drug-related direct costs during the tenure of the agreement.
- iii) **Patients with advanced disease and metastasis** who need additional cycles of chemotherapy, radiotherapy, and hormonal therapy beyond the set limits would often be compelled to pay out of pocket for the care.



Prostate cancer commodities: As indicated in Table 6, 60% (3 out of 5) of all the WHO-recommended essential drugs for prostate cancer, except for Leuprolin and Abiraterone/ Enzalutamide, are available in the KEMSA procurement list.

Table 6: Price Inventory of Essential Drugs for Prostate Cancer

Price Inventory of Essential Drugs for Prostate Cancer				
Drugs in WHO EML	Form and Dosage	Indication	Innovator or Generic	Median Price (KEMSA)
Docetaxel (antineoplastic)	Injection: 20 mg/mL, 40mg/mL	Early-stage prostate cancer, Metastatic prostate cancer	Generic	2,470
Abiraterone/ Enzalutamide	Tablet: 250 mg; 500 mg	Metastatic castration-resistant prostate cancer	Not available	
Bicalutamide Alternatives: - flutamide; nilutamide	Tablet: 50 mg	Metastatic prostate cancer	Generic	2,000
Leuporelin Therapeutic alternatives: - goserelin - triptorelin	Injection: 7.5 mg; 22.5 mg in pre-filled syringe.	Metastatic prostate cancer	N/A	
Prednisolone Therapeutic alternatives: - prednisone	Tablet: 5 mg; 25 mg	Metastatic castration-resistant prostate cancer	Generic	100

Source: KEMSA, Analysis by Consultant

Additionally, the majority of the commodities recommended as essential drugs for prostate cancer are included in the national EML and in the local treatment guidelines and cancer centre drug formularies, as in Table 8. Only Leuprolin and its congeners are not included in the local treatment guidelines. All the listed commodities are available in their generic forms under the KEMSA commodities list.



Table 7: Local Inventory of Essential Drugs for Prostate Cancer

Local Inventory of Essential Drugs for Prostate Cancer						
Drugs in WHO EML	Form and Dosage	Indication	Innovat or or Generic	In Local Treatment Guidelines?	In Country's EML?	In Drug Formulary?
Docetaxel (antineoplastic)	Injection: 20 mg/mL, 40 mg/mL	Early-stage prostate cancer, Metastatic prostate cancer	Generic	YES	YES	YES
Abiraterone/ Enzalutamide	Tablet: 250 mg; 500 mg	Metastatic castration-resistant prostate cancer		YES	YES	YES
Bicalutamide Alternatives: - flutamide; nilutamide	Tablet: 50 mg	Metastatic prostate cancer		YES	YES	YES
Leuprorelin Therapeutic alternatives: - goserelin - triptorelin	Injection: 7.5 mg; 22.5 mg in pre-filled syringe.	Metastatic prostate cancer.	Goserelin available	NO	YES	YES
Prednisolone Therapeutic alternatives: - prednisone	Tablet: 5 mg; 25 mg	Metastatic castration-resistant prostate cancer	Generic	YES	YES	YES
Zoledronic Acid	IV	Hormone-refractory prostate cancer and symptomatic bone metastases	Generic	YES	YES	YES

Source: KEMSA, Analysis by Consultant



Negotiated access arrangements

i. MOH-ROCHE-NHIF MOU on Financing Trastuzumab (Herceptin) Subcutaneous (SC) 600mg within NHIF Cover Limits

Breast cancer remains a leading cause of morbidity and mortality among women in Kenya and worldwide. Trastuzumab (Herceptin) is a targeted therapy that has significantly improved outcomes for patients with HER2-positive breast cancer.¹³ Recognising the high cost of cancer treatment, the MOH, in collaboration with Roche and the NHIF, established a Memorandum of Understanding (MOU) to subsidise the cost of Trastuzumab (Herceptin) SC 600mg for eligible patients within the NHIF cover limits from 2021/2022.

MOH, through the NCCP, was to procure and supply Doxorubicin, Cyclophosphamide, Paclitaxel, Docetaxel and Carboplatin directly to the GOK providers in the project. These are not reimbursable as per the benefits coordination clause in the contract. NHIF reimburses KES 33,330 to the provider per session of treatment with Trastuzumab (Herceptin) for 18 cycles, which is the cost of the agreed access price for the project and the hospital administration costs of running the project.

The provider offers the entire course of treatment comprehensively, with co-payments for HER2 testing, other immunohistochemistry tests and three echocardiography sessions beyond the cover limits (applicable to National Scheme beneficiaries).

Cancer Centres implementing Trastuzumab (Herceptin) Sc Mou

- Kenyatta National Hospital
- Moi Teaching and Referral and Hospital
- Kenyatta University Teaching Referral and Research Hospital
- Meru County Teaching and Referral Hospital
- Nakuru County Referral Hospital
- Garissa County Referral Hospital
- Coast General Teaching and Referral Hospital

¹³ Slamon, D. J., Leyland-Jones, B., Shak, S., Fuchs, H., Paton, V., Bajamonde, A., Fleming, T., Eiermann, W., Wolter, J., Pegram, M., Baselga, J., & Norton, L. (2001). Use of Chemotherapy plus a Monoclonal Antibody against HER2 for Metastatic Breast Cancer That Overexpresses HER2. *New England Journal of Medicine*, 344(11), 783–792. <https://doi.org/10.1056/NEJM200103153441101>



- Embu County Referral Hospital
- Nyeri County Referral Hospital
- Jaramogi Oginga Odinga Teaching and Referral Hospital
- Kakamega County Referral Hospital
- Machakos County Referral Hospital
- Makueni County Referral Hospital

ii. Novartis and Mission for Essential Drugs and Supplies (MEDS) MOU on Letrozole

There is a highly subsidised access program under the Novartis Access programme¹⁴ to improve access to Letrozole for advanced breast cancer treatment at under a dollar a month, but confined to patients receiving treatment in faith-based facilities served by MEDS. These include two urban facilities, the Nairobi Hospital (Private Referral Facility) and KUTRRH (National Referral Facility).

iii. Max Foundation/Ministry of Health MOU on Glivec

Imatinib (Glivec) for Chronic Myeloid Leukaemia and Gastrointestinal Stromal Tumours (GIST) is available only to patients at select public cancer centres approved as spokes to the Max Foundation Regional Hub (Nairobi Hospital). The government facilitates tax waivers for these donations through the MOH, National Treasury, and Kenya Revenue Authority (KRA).

Challenges in Purchasing

Affordability of oncology commodities: The affordability of commodities is influenced by market dynamics such as limited global suppliers, restricted domestic production, reliance on imports, and high international demand exceeding availability, like for Cyclophosphamide. Weak pharmaceutical regulation allows many low-quality oncology products to flood the market, putting cancer patients' health at risk.

Cumbersome product registration process: Cumbersome product registration processes within the country engender significant delays in product entry and circulation within the Kenyan market.

¹⁴ <https://pharmaphorum.com/news/novartis-debuts-1-a-month-drug-access-programme-in-kenya>



Complex procurement processes: Stringent and inflexible procurement processes under the existing procurement framework limit maximising value-for-money gains that would easily be harnessed through flexible arrangements with manufacturers. This further results in delays in procurement, hence deterring availability.

Long lead times during procurement: Reliance on external suppliers engenders long lead times before products can be delivered to the central stores and delivered to the respective facilities. This limits timely access to the critical commodities.

Limited collaboration and stakeholder engagement hindering negotiated access arrangements: Limited multistakeholder engagements and negotiations between critical stakeholders i.e. MOH, KEMSA, MOF, and drug manufacturers hinders establishment and enforcement of negotiated access arrangements that would further lower the care costs and enhance access to the critical commodities. Additionally, existing access arrangements have very limited geographical scopes hence locking out a majority of potential beneficiaries.

‘Previously, we used to have an access program for several products, but due to the changes at the MOH, there are a lot of systems that are not talking to each other. The access program, or the engagement of KEMSA directly with manufacturers, was moved to a ministry department and we are no longer engaging directly with the manufacturers,’

KEMSA Stakeholder



Inadequate and inconsistent financing of oncology commodities

Inadequate financing of oncology services, coupled with inconsistent and delayed disbursements to KEMSA, counties, and cancer centres, deters the efficient procurement and distribution of oncology commodities by the central procurement authority.

‘But money trickling down to KEMSA is an issue, and that is what has been causing delays... at the moment we are out of stock of the 21 priority items because the money was not released on time by the ministry...’

KEMSA Stakeholder

‘...counties are not procuring any anti-cancer medicine...the other thing is nonpayment of the counties...at the moment, we're also out of stock because of unpaid money by the counties...’

KEMSA Stakeholder



Recommendations

Strengthening public finance management systems to improve budgetary space for health and cancer financing

a. Increase allocations and visibility of investments in cancer care

The government (national and county level), through its treasuries and departments of health, should increase budgetary allocations to cancer care and include the same in planning and budgeting tools such as the medium-term expenditure frameworks, county integrated development plans, programme-based budgets, and annual work plans.

b. Strengthen frameworks that encourage on-budget financing of cancer care by donors

Alongside increasing public financing of cancer services, the governments (national and county level) should collaboratively institute and enforce a framework that supports visibility and accountability of external cancer funding and encourages the use of the country's public finance management systems.

c. Strengthen public finance management systems to expand fiscal space

The government should continuously invest in strengthening of the public finance management systems with a view to enhancing efficiency across the entire continuum including revenue mobilization and management, pooling, procurement and accountability. This would not only expand the fiscal space for health and cancer care but would also ensure the public extracts the highest value for their resources across all sectors.

Increase health system investments to support cancer prevention and treatment

a. Prioritise preventive and promotive interventions targeted at cancer care

Increased investments in preventive, and promotive interventions to enhance population awareness, cancer screening, early diagnosis, and timely treatment.



b. Increase investments in screening and diagnostic capacities at the primary health level

Strategically increase investments in screening and diagnostic capacities at the primary health level, including peri-urban and rural areas, and among public facilities with a view to increasing access and uptake of these services by a majority of the population.

c. Increase investments in diagnostic and treatment capacities

Progressively increase investments in diagnostic and treatment capacities including equipment, specialized human resources and oncology commodities across the country with a view to increasing access, predictability and continuity of cancer diagnosis and treatment.

d. Increase investments to strengthen cancer surveillance systems

Increase investments to strengthen cancer surveillance systems and structures including the cancer registries with a view to enhancing evidence-based proactive planning, financing and cancer care.

Improve benefit design for quality, equity and financial protection

a. Harmonisation of benefit packages for equity

The NHIF, now SHA, should harmonize cancer care benefit packages across the beneficiary categories to guarantee equity for all beneficiaries.

‘...in terms of equity...there are several aspects that have been achieved in the current contract cycle...one of them is the standardization, the aspect around standardization (across schemes)...’

SHA Stakeholder



b. Limit pool fragmentation for efficiency

The SHA should limit fragmentation of the resource pool by restricting or limiting the Enhanced Schemes so as to maximize efficiencies of resource and risk pooling and redistribution derived from a large pool.

c. Refine reimbursement tariffs to incentivise quality and efficiency

The national health insurance (NHIF/SHA), drawing from utilization data, should periodically revise reimbursement tariffs to improve efficiency and cost management while ensuring adherence to care and quality standards.

d. Improve cancer care service offerings and claiming capacity for public facilities

The government should strengthen the capacity of their facilities tap into the cancer care resources through 1) improving service provision for cancer care (screening, diagnosis, treatment, rehabilitation, and palliation); and 2) in capacity building and resourcing their facilities and teams to prepare, submit and follow-up claims to SHA in a timely manner.

e. Refine cancer care benefit packages towards broader comprehensive coverage and financial protection.

The national health insurance (NHIF/SHA), drawing from utilization and epidemiological data, should progressively revise and enrich its cancer care benefit packages towards broader comprehensive coverage with a view to limiting the need for co-payments and OOP.

Further, SHA should progressively revise and enrich their cancer care benefit packages to include services across the continuum of care from screening, diagnosis, treatment, rehabilitation and palliation.

f. Strengthen performance management and tracking for quality care outcomes.

The government and the national health insurance (NHIF/SHA) should invest in strengthening quality of care tracking and performance management systems across the providers with a view to incentivising quality care outcomes and care aligned to the available evidence-based guidelines.



'...the other bit that we are intending to do is to have a monitoring aspect for the treatment outcomes, because it's been one of the challenges that we've had. We are spending quite a lot when it comes to cancers. But then, at the moment, we are not able to monitor the impact in terms of the clinical outcomes.... (and) the longevity over time...'

SHA Stakeholder



Strategic purchasing of oncology commodities

a) Flexibility coupled with accountability of the procurement process for oncology commodities

The government (MOH, MOF, KEMSA, Auditor General, Attorney General and NHIF/SHA) should establish flexibility and accountability mechanisms to facilitate expedited yet accountable procurement of the specialised oncology commodities devoid of the red tape posed by the existing structures.

‘...the government can redefine these commodities as highly specialized so that it doesn't go through the normal procurement process...they should be exempted ...because most of the delays and issues that we have, as well as the high cost is caused by the current process...if they can be redefined and exempted from that, we can be engaging the manufacturer where we know the quality or the reputation of the companies or companies that are regulated through strategic regulatory authorities. We can engage with them in terms of price.’

KEMSA Stakeholder



b) Strengthen regulation for quality oncology commodities

The government through the MOH, the Pharmacy and Poisons Board, the National Quality Control Laboratory, the National Cancer Institute and the NCCP should collaboratively engage with a view to strengthening enforcement of quality standards in the procurement and management of the specialised oncology commodities.

c) Adequate and timely financing of oncology commodities

The government (MOF, MOH, and NHIF/SHA) should increase budgetary allocations for oncology commodities and streamline the disbursement of the funds to counties and KEMSA with a view to reducing stockouts occasioned by inadequate financing and disbursements.

‘...the government needs also to allocate more money on procurement of these commodities...if we can get proper funding, proper financial budget for these commodities and they can be separated from other essential medicines and are treated as specialized products...’

KEMSA Stakeholder

d) Regional pooled procurement for efficiency and economies of scale

The government (MOH, MOF, and KEMSA) should actively explore and engage regional stakeholders (including the African Union, and the East African Community) with a view to establishing mechanisms for pooled procurement of specialised commodities, including oncology commodities.



‘And the other thing is, maybe we can as well also look at having, you know, regional pooled procurement where we aggregate all our data and engage as a region of various countries. But that can only happen when we have redefined these commodities as highly specialized, and we have legal backing of KEMSA, or any of the national procurement authorities.’

KEMSA Stakeholder

e) Enhance access arrangements for oncology commodities

The government (MOH, MOF, KRA and KEMSA) should actively explore and establish negotiated access arrangements for oncology commodities with manufacturers globally to enhance access and significantly reduce related commodity costs.

‘...what Uganda has done is ...they have enhanced collaboration with the stakeholders and legalised procurement of anti-cancer as highly specialised commodities.’

KEMSA Stakeholder

‘...they have the Minister of Finance, Minister of Health, their revenue authority, and all those on one the table, so that the processes in terms of regulation and taxes are reduced.’

KEMSA Stakeholder



Conclusion

The cancer care landscape in Kenya reveals significant challenges, including delayed diagnoses, lack of standardisation in reporting, limited diagnostic capacities, and a shortage of specialised healthcare workforce. These issues are compounded by the broader health financing context, where government health budget allocations fall below recommended thresholds and heavily rely on OOP and donor resources.

The government, through the MOH, county governments, and NHIF has attempted to address some of these challenges through a participatory approach to developing beneficiary entitlements. However, the depth of coverage varies across different NHIF schemes, with patients often incurring substantial direct payments for cancer care, particularly in facilities under non-comprehensive NHIF contracts.

Several key recommendations emerge to improve cancer care financing and accessibility in Kenya. These include strengthening public finance management systems, increasing health system investments for cancer prevention and treatment, improving benefit design for equity and financial protection, and implementing strategic purchasing of oncology commodities. By addressing these areas, Kenya can progressively work towards a more equitable and effective cancer care system that reduces the financial burden on patients and improves overall health outcomes. Implementing these recommendations will require concerted efforts from national and county governments, as well as collaboration with private sector stakeholders and international partners.



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For more details, reach out to the Access to Oncology Medicines Coalition at atom@uicc.org or Amy Israel at israel@uicc.org.

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