

ADDRESSING HEALTH CHALLENGES *in Kenya*



Next Adventure (n.d.)

Executive Summary

In Kenya, **tuberculosis (TB)** and **HIV/AIDS** continue to be the leading causes of mortality, disproportionately impacting vulnerable groups. Despite improvements, challenges including **gender disparities**, **underreporting**, and **limited access to healthcare** still exist. Drug-resistant TB is a growing threat, and TB-HIV co-infection makes disease control even more difficult.

Expanding **access to antiretroviral therapy (ART)**, **strengthening TB surveillance**, and **reducing stigma** through public awareness campaigns are essential to addressing these problems. The implementation of focused interventions and the improvement of healthcare facilities can improve treatment outcomes. This policy brief urges the Kenyan government to adopt sustainable strategies that improve healthcare access and reduce the burden of HIV/AIDS and TB.

Introduction

Overview of TB and HIV/AIDS as Public Health Issues in Kenya

In Kenya, tuberculosis (TB) and HIV/AIDS continue to be major public health issues. **TB prevalence in 2016 was 558 per 100,000 adults**, and while the integration of TB and HIV services has contributed to a decline in the epidemic, under-reporting remains a concern, with an estimated **20.7% of smear-positive cases going unreported** (Tollefson et al., 2016). Males, urban dwellers, and people between the ages of 25 and 34 are disproportionately affected by TB, and control efforts are made more difficult by gaps in diagnosis and healthcare-seeking behavior (Enos et al., 2018).

Similarly, with one of the most severe epidemics in the world, HIV/AIDS is a serious problem in Kenya. Recent studies indicate that the prevalence of HIV in women is still disproportionately high; among women aged 15–49, **the prevalence rate is 9%, which is almost twice as high as that of men** (Enos Njeru, Peter Mwangi & Mary Nguli, 2004). The gender gap in HIV infection rates highlights the critical need for gender-specific interventions and the significance of tackling the underlying causes of these disparities.

The Relationship Between HIV and Tuberculosis in Kenya

HIV and TB are strongly associated, and in Kenya, HIV is the primary cause of TB-related morbidity and mortality (Mbithi et al., 2014). Between 2007 and 2012, the incidence of TB decreased by 28–44% in individuals with HIV, whereas it decreased by 11–26% in adults without HIV (Yuen et al., 2014). Despite these improvements, the incidence of TB in people with HIV is still **eight times greater than in people without HIV** (Yuen et al., 2014), and **42% of TB-related deaths in Kenya are caused by HIV** (Onyango et al., 2017).

The Broader Socioeconomic Impacts of HIV/AIDS in Kenya

The healthcare system and economy of Kenya have also been significantly impacted by HIV/AIDS. It influences **economic, educational, and demographic indicators** in addition to the health system, impacting things including economic growth and life expectancy (Bernhard Ozofero Ishioro, 2016). This emphasizes how critical it is to address HIV/AIDS as a broader socioeconomic issue in addition to a health crisis.

Healthcare Access Barriers in Kenya: Financial and Geographic Challenges

In Kenya, there are many obstacles to accessing healthcare services, especially in informal settlements and urban slums. Access to healthcare is significantly restricted by **financial barriers** such as high out-of-pocket expenses (Brian Odhiambo and Purity, 2022; Otieno et al., 2020). Access is further restricted by **geographic obstacles**, such as the distance to healthcare facilities (Brian Odhiambo and Purity, 2022).

Kenya's healthcare expenditure in 2021 was **4.55% of GDP**, which was slightly less than the average for Sub-Saharan Africa (5.11%). This suggests **a relatively low level of healthcare investment in comparison to regional standards**, which could affect the country's ability to tackle significant public health issues like HIV/AIDS and TB.

Key Health Metrics in Kenya: A Snapshot

- **Physicians:** 0.1 per 1,000 people (World Bank, 2022a)
- **Nurses and midwives:** 0.6 per 1,000 people (World Bank, 2022b)
- **Specialist surgical workforce:** 2 per 100,000 people (World Bank, 2016)
- **Hospital beds:** 1.3 per 1,000 people (World Bank, 2019)
- **Current health expenditure:** 4.55% of GDP (World Bank, 2021)

Mortality Trends of TB and HIV/AIDS in Kenya: Global Burden of Disease Data

According to the Global Burden of Disease (GBD) data, TB and HIV/AIDS rank among the top causes of mortality in Kenya. **The second most common cause of death in 2021 was HIV/AIDS, followed by TB in third place.** Despite some progress in reducing deaths from these diseases, they remain significant contributors to mortality in the country. Vulnerable populations, such as those living in rural areas and marginalized communities, are disproportionately affected by these diseases.

The persistent high mortality rates highlight the ongoing public health burden that HIV/AIDS and TB pose in Kenya, requiring sustained efforts to enhance healthcare access, prevention, and treatment.



Research Approach

Using a comprehensive research approach, this policy brief analyzes the impact of HIV/AIDS and TB in Kenya, focusing an emphasis on socioeconomic determinants, treatment efficacy, and healthcare accessibility.

The World Bank, the Global Burden of Disease Project, and the World Health Organization (WHO) are some of the key global health institutions whose data are used in this study. Epidemiological reports and systematic reviews of peer-reviewed literature additionally provide insight into the prevalence of diseases and the effectiveness of treatments. Kenya's healthcare performance is compared to that of other sub-Saharan African countries using comparative analysis techniques.

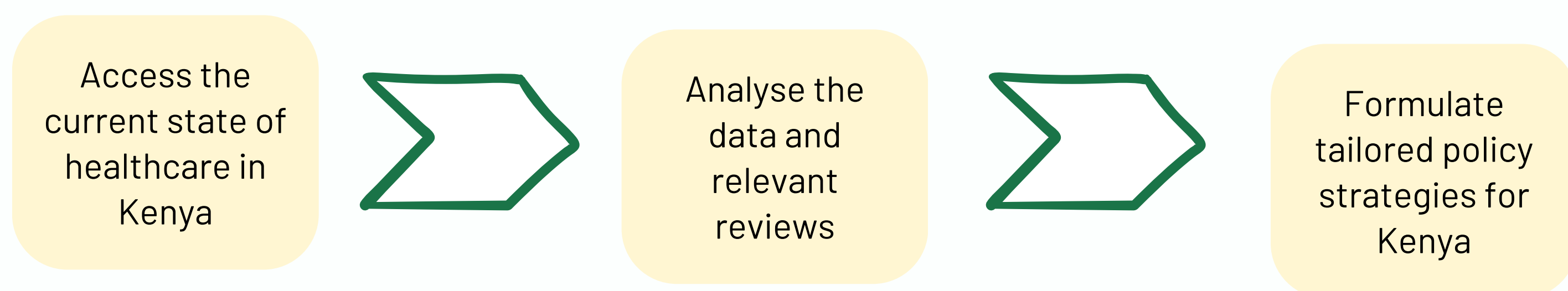


Figure 1: Visual Illustration of Research Approach (own illustration)

Limitations

- .This policy brief only addresses a limited number of issues and **does not cover all potential health challenges**. Important aspects of HIV/AIDS and TB in Kenya are covered, but more research is needed to fully understand larger systemic and infrastructure issues such as workforce shortages and healthcare financing.
- .A number of the data sources that are currently accessible are **outdated**, which could compromise the precision of policy recommendations. In Kenya, access to reliable healthcare data is still difficult, especially in rural and low-income regions.

Key Findings

1) HIV/AIDS

Poverty is one of the main barriers to HIV treatment access in Kenya. Due to the roughly **40 percentage point difference in treatment coverage rates** between the wealthiest and poorest counties, accessing care is more challenging (Haacker and Birungi, 2018). **Only 50–60% of eligible patients are taking antiretroviral therapy (ART)** despite advancements, indicating insufficient treatment coverage (Kim et al., 2016).

Even while Kenya has made significant progress, there are still obstacles to overcome, especially in implementing ART for all eligible people. **Mother-to-child transmission rates decreased from 5.9% to 2.5%** between 2013 and 2016 as a result of the WHO Option B+ guidelines, which led to a significant increase in the number of pregnant women starting ART earlier (Pricilla et al., 2018). But **only 20.7% of infants with HIV receive ART on time** (Wexler et al., 2020).

In 2015, the WHO released new guidelines to reduce mother-to-child transmission (MTCT) of HIV. These guidelines, known as **Option B+**, recommend starting lifelong highly active antiretroviral therapy (HAART) for all HIV-positive pregnant and breastfeeding mothers, regardless of what their CD4 count is.
(Maingi et al., 2022)



Ratner (2018)

Drug-resistant HIV strains are becoming more prevalent, endangering the effectiveness of treatment. Because 25% of patients who do not respond to second-line ART show complete resistance to both first and second-line treatments, there is an urgent need for access to third-line medications (Inzaule et al., 2017).

In Kenya, **ART coverage increased by 47.6% between 2015 and 2020** as a result of the implementation of community-based and digital health programs (Babatunde et al., 2023).

Additionally, access to HIV healthcare **differs in rural and urban areas**. Urban residents, especially those who are poor, are more at risk, while rural areas have service gaps, especially in HIV testing and prevention (Cawley et al., 2017). HIV care must be geographically more equitable in light of this disparity.

HIV vulnerability is also influenced by **social** and **gender factors**. Gender inequality makes women more vulnerable, especially those who are younger, less educated, and unemployed (Sesay, 2017). Injecting drug users (PWID), female sex workers (FSWs), and men who have sex with men (MSM) are key populations at increased risk. These groups deal with issues like high rates of violence and limited access to preventative resources (Bhattacharjee et al., 2015). Furthermore, because of criminalization and stigma, transgender people and prisoners—who are frequently marginalized by society—are commonly overlooked in HIV interventions (Busolo and Ngigi, 2020). To effectively prevent HIV in Kenya, these vulnerabilities must be addressed.

II) Tuberculosis

In Kenya, **TB treatment interruption** is still a major problem, with rates of **8.5% among retreatment patients and 4.5% among new patients** (Masini et al., 2016). Prior loss to follow-up, TB relapses, and HIV-positive status without ART are risk factors for treatment failure (Masini et al., 2016). Additional contributing factors include drinking alcohol, having a low income, and having to wait a long time (Wanyonyi et al., 2017). Significant obstacles for children and young people include a lack of knowledge, financial strain, and delays in the health system (Sullivan et al., 2017).

Patient-related delays in TB diagnosis reduce outcomes; these delays typically last **34 days** and are caused by stigma, self-medication, and a lack of awareness (B.K et al., 2023; Onyango et al., 2017). Due to delayed test results, insufficient counseling, and numerous hospital visits, health system delays typically last **13 days** (B.K et al., 2024). Traditional healers and sociocultural factors also contribute to delays (Mbuthia et al., 2018).



CHS Kenya, (2024)

Using an ambulatory care model, Kenya's multidrug-resistant TB (MDR-TB) treatment program has a 76.6% success rate (Huerga et al., 2017). However, negative side effects like nausea and electrolyte imbalances affect 67.4% of patients (Huerga et al., 2017). Women and those with HIV are more likely to experience negative treatment outcomes (Huerga et al., 2017).

Although Kenya's TB treatment outcomes have surpassed WHO targets, problems persist, particularly with high-risk groups. **Male gender and HIV co-infection** are linked to **lower success rates** (Arentz et al., 2011; Huerga et al., 2017; Mibei et al., 2016). To improve TB control, targeted interventions should focus on high-risk groups, promote integrated TB-HIV care, and address regional differences in treatment adherence (Arentz et al., 2011; Masini et al., 2016).

Policy Recommendations

I) HIV/AIDS

Reducing HIV-related stigma

A systematic review and meta-analysis of studies conducted between 2002 and 2016 found that people living with HIV who experience high levels of HIV-related stigma are **2.4 times more likely to delay seeking care** until they are seriously ill (Gesese et al., 2017). **Comprehensive sexuality education** (CSE) has been shown to reduce sexual risk behaviors among young people while also addressing HIV-related stigma (UNAIDS, 2023; WHO, 2021). Furthermore, CSE contributes to broader health and development outcomes, including poverty reduction and gender equality, thus tackling underlying drivers of HIV-related disparities (UNAIDS, 2023).

With a focus on **education** and **awareness**, the Ministry of Health should start nationwide actions that reduce the stigma associated with HIV. To promote more accepting attitudes toward those living with HIV, these programs should focus on healthcare facilities, workplaces, and educational institutions.



Expanding ART access through task-shifting

In environments with limited resources, **task-shifting**—specifically from physicians to nurses—has been suggested as an effective strategy to increase access to ART (Emdin and Millson, 2012). In only one year, task-shifting significantly **increased ART coverage from 6.6 million to over 8 million** people living with HIV in low- and middle-income countries. **Improved access to ART** has decreased the number of AIDS-related deaths in sub-Saharan Africa from **1.8 million in 2005 to 1.2 million in 2011** (UNAIDS, 2012). Additionally, this strategy has been effective in high-income environments, improving patient outcomes (WHO, 2006).

The Ministry of Health should give **task-shifting plans** top priority to significantly improve ART accessibility. This includes improving healthcare professionals' ability to provide ART safely and effectively, especially nurses, through **evidence-based training programs**. Standardized guidelines and ongoing professional development programs should also be put in place to ensure that ART is delivered in a high-quality manner. To measure and evaluate these strategies and ensure their long-term effects, especially in underserved and rural areas, cooperation with regional and global organizations is necessary.

Expanding access to Pre-Exposure Prophylaxis (PrEP)

Key groups at high risk of HIV have been highlighted by UNAIDS and WHO, including FSWs, PWID, MSM, gay, bisexual, and transgender people, and those living in prison or other closed environments (UNAIDS, 2023). Mathematical models predict that, over the next decade, a well-implemented PrEP program **could prevent 2.7–3.2 million new HIV infections** in sub-Saharan Africa (Abbas et al., 2007; Li et al., 2009). Model simulations further indicate that **PrEP can significantly reduce HIV incidence in high-risk populations** (Paltiel et al., 2009; Paxton et al., 2007).

The Ministry of Health should **make sure PrEP is available in healthcare facilities** that treat high-risk groups in order to increase its distribution among these groups and optimize its effects. **Public awareness campaigns** should educate communities on PrEP's effectiveness and safety, addressing common misconceptions. Furthermore, financial barriers should be reduced through **subsidies or free provision of PrEP in government health centers**. These initiatives aim to ensure PrEP reaches the most vulnerable populations and is in line with global HIV prevention goals.

Preventing mother-to-child transmission (MTCT) of HIV

ART **significantly decreases** the risk of HIV transmission from MTCT during pregnancy (Myer, 2011; Saleska et al., 2018; Sturt et al., 2010). Because of stigma and a fear of being identified, many women **conceal their HIV status** and take medication in secret (Colombini et al., 2014). Due to their male partners' denial of HIV and adherence to traditional norms regarding masculinity, women are sometimes compelled to seek care discreetly or are not given the opportunity to receive treatment (Skovdal et al., 2011).

By **ensuring** that all pregnant women have **access to ART and prenatal care**, the Ministry of Health should step up efforts to reduce MTCT. To increase adherence and lower the risk of transmission, **community-based education programs** should emphasize women's empowerment and actively **include male partners in HIV care** during pregnancy.

Expanding sexual health education and promoting condom use

When used regularly, **condoms can reduce risk by more than 70%**, making them one of the most effective ways to prevent HIV transmission among heterosexual couples (Giannou et al., 2016). By delaying the onset of sexual activity, reducing unprotected sex, and **promoting the use of condoms and contraceptives**, comprehensive sexual education programs have been shown to be successful in lowering risky sexual behaviors among adolescents (Andrade et al., 2009; Douglas Kirby, 2011). Additionally, a systematic review verified that these programs successfully lower risky behaviors without increasing adolescent sexual activity (Rodríguez-García et al., 2025).

The Ministry of Health should **encourage sexual health education in community centers, schools, and through public awareness campaigns** and should place greater emphasis on the use of condoms and safe sexual practices. **Free condom distribution programs** need to be expanded, **especially in high-risk areas**, and should include educational training that encourages appropriate and consistent usage.



II) Tuberculosis

Multidrug-Resistant Tuberculosis (MDR-TB)

A serious threat to health worldwide is **multidrug-resistant tuberculosis (MDR-TB)**, which is brought on by *Mycobacterium tuberculosis* that is resistant to at least isoniazid and rifampicin (Paul, 2018; Sharma and Mohan, 2006). MDR-TB is primarily caused by **inadequate or incorrect treatment**, though host genetic factors may also be involved (Ormerod, 2005; Sharma and Mohan, 2006). Prevention of MDR-TB requires effective TB control programs, especially those based on **directly observed treatment, short-course (DOTS)** (Sharma and Mohan, 2006). Additionally, under program conditions, innovative strategies like **DOTS-plus** have demonstrated promise in managing MDR-TB (Sharma and Mohan, 2006).

The Ministry of Health should make it a top priority to **strengthen and expand DOTS programs** to combat MDR-TB in Kenya. This will ensure that patients receive adequate and comprehensive treatment to prevent resistance. The Ministry should also use cutting-edge strategies like **DOTS-plus**, which provides improved assistance for managing MDR-TB.

This entails enhancing diagnostic capabilities, guaranteeing the supply of second-line medications, and educating healthcare professionals. To ensure the sustainability of these strategies and track their efficacy, cooperation with regional and global organizations will be crucial. Improving treatment outcomes and lowering the prevalence of MDR-TB can be achieved by increasing access to care, especially in high-risk areas. Furthermore, MDR-TB treatment programs should incorporate HIV co-infected patients in addition to HIV care.



Health Policy Watch (2021)

Misinformation About TB Transmission and Treatment

There is still a lot of misinformation about how TB is spread and how to treat it, which makes it more difficult to manage the illness. Research from several nations has revealed that many individuals think that TB spreads by **physical contact, food, or utensils** (Sreeramareddy et al., 2013; Theng et al., 2013). In order to eliminate these misconceptions, **education** is essential, and **radio** is a helpful channel for spreading accurate information (Sreeramareddy et al., 2013). Additionally, **social media** has potential as a tool for TB education among younger populations (Theng et al., 2013).

Public awareness initiatives should be given top priority by the Ministry of Health in order to address widespread misunderstandings regarding the treatment and transmission of TB. **Radio, television, and social media channels should all be used in these advertisements**, with a focus on underserved and rural areas. Accurate information will reach the public, including patients during consultations, if community leaders, healthcare professionals, and local organizations work together. Additionally, **incorporating teaching on TB into school curricula** helps improve knowledge among younger generations and slows the spread of false information.

By addressing myths through multiple channels, the ministry can improve public knowledge and contribute to more effective TB control efforts.

Socioeconomic Support Mechanisms

Studies consistently show a strong relationship between living conditions and TB outcomes. Poor living conditions, such as **overcrowding** and **inadequate ventilation**, are linked to higher rates of TB incidence and mortality (Erazo et al., 2014; Zürcher et al., 2016). Better living conditions and public health measures like **screening programs** and **outdoor schools** have historically reduced TB rates (Zürcher et al., 2016). However, TB incidence is still unevenly distributed, with higher rates in areas that are socially vulnerable (Erazo et al., 2014; Valente et al., 2019).

To reduce TB rates, the Ministry of Health should prioritize **improving housing conditions**, especially in high-risk areas. **Reducing crowding** and **ensuring proper ventilation** are critical actions. Additionally, TB transmission may be reduced by **promoting outdoor education** and **integrating TB screening programs into public housing policies**. Additionally, **providing financial support** to individuals who are unable to continue their treatment can improve adherence and enhance outcomes.

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Figures

Figure 1: Visual illustration of the Research Approach (own illustration) 3