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HIV/AIDS in Tanzania: History, national response, and challenges

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ABSTRACT

Tanzania, alongside 34 other countries, accounts for more than 90% of the people acquiring new HIV infections globally. Since the beginning of the HIV/AIDS epidemic, the country has put forward a response that is intended to reduce its incidence and improve quality of life for sufferers. The country has also now keyed into the UNAIDS 90-90-90 fast-track targets to achieve the global target of ending HIV/AIDS as a public health threat by 2030. This review aimed to discuss HIV/AIDS in Tanzania, detailing the historical events, the national response, the challenges in addressing the epidemic, and the factors related to national response sustainability. We searched valid academic sources for information on the areas covered by our study scope and found some strategic literature, which we reviewed. The first HIV/AIDS patients in Tanzania were seen in October 1983 at Bukoba Regional Hospital in the Kagera Region, located in the North-Western part of the country. To combat the HIV/AIDS menace, Tanzania evolved a national response to the scourge to protect the public's health. The governance of the HIV/AIDS national response system is vested in the division of National Response in the Tanzania Commission for AIDS (TACAIDS). This formation co-ordinates the multi-sectoral implementation of HIV/AIDS interventions in the country. The sectoral response is co-ordinated through the public and private sectors, civil society organisations, regions, local government authorities, and the community. Tanzania has adopted the WHO 2015 guidelines for treating all people living with HIV (PLHIV) irrespective of disease stage. However, the Tanzanian national response to the HIV/AIDS scourge in the country is fraught with challenges that border on certain cultural, societal, structural, and political realities and value systems. Surmounting these challenges would require concerted efforts of relevant stakeholders directed at the root causes, especially the challenges that concern financing and the health workforce. Thus, sustainability will depend on continued political leadership and adequate funding.

INTRODUCTION

Tanzania is the United Republic between the Mainland and Zanzibar, in the eastern part of Africa and the WHO Africa region. Its neighbouring countries are Kenya and Uganda to the north, Rwanda, Burundi, and the Democratic Republic of Congo to the west, and Zambia, Malawi, and Mozambique to the south. According to the 2016 data, the population was 55.57 million (The Commonwealth, 2019). It is among the thirty-five countries accounting for more than 90% of the people acquiring new HIV infections globally (World Health Organisation [WHO], 2016, p. 7). National response has been in place since the beginning of

the epidemic, and the country has laid down strategies to meet the UNAIDS 90-90-90 fast-track targets and eventually achieve the global target of ending AIDS as a public health threat by 2030 (Ministry of Health Community Development, Gender, Elderly, and Children [MoHCDGEC] 2017a, p. 12). This paper discusses HIV/AIDS in Tanzania, detailing the historical events, the national response, the challenges in addressing the epidemic, and the factors related to national response sustainability.

HISTORICAL PERSPECTIVES

The first HIV/AIDS patients in Tanzania were seen in October 1983 at Bukoba regional hospital in the Kagera region, located in the north-western part of the country (MoHCDGEC, 2005). The period coincided with reports of HIV/AIDS patients in other parts of the world, including the U.S. and other industrialised countries (Harden, 2012, pp. 106–109). Similarly, in the same year (1983), epidemiological studies of Haitian HIV/AIDS patients were published (Harden, 2012, p. 186). Studies in Zaire also indicated a 6-7% prevalence of HIV in pregnant women attending ANC in 1984 (Harden, 2012, p. 189). HIV-1 prevalence was 3-5% in the 1980s in West Equatorial Africa (Harden, 2012, pp. 192–193).

The rest of East Africa was also affected at around the same period. Later (in the early 1990s), the southern African countries of Zambia, Malawi, Zimbabwe, Botswana, and South Africa became affected (Harden, 2012, pp. 195–196). Bukoba region borders the neighbouring countries of Uganda and Rwanda. In this Lake Victoria region, which includes Rwanda, Burundi, and Uganda, the epidemic was dominated by commercial sex. Furthermore, molecular methods had estimated that HIV-1 reached East Africa in the 1970s with a prevalence of 1-8% among pregnant women in different East African countries by the mid-1980s (Pepin, 2011, p. 212). Asian countries affected at around the same period were India (1986), Thailand (1984), Philippines (1985), Singapore and Sri Lanka (1986), Tonga, French Polynesia, Indonesia and Malaysia (1987), China (1986), and others after 1988 (Harden, 2012, pp. 205–206). In eastern Europe, Russia, and Central Asia, HIV infections were first found in the mid-1980s to the 1990s (Harden, 2012, p. 209).

The clinical features in the first patients in Tanzania were severe weight loss, prolonged diarrhoea, persistent fever, muscle wasting, oropharyngeal candidiasis, and genital ulcers (MoHCDGEC, 2005). The clinical features resembled the 'slim disease' described in other African countries (Harden, 2012, pp. 191–198). Additionally, in other central and east African countries in the 1970s and early 1980s, the condition was known by both names 'slim ' and Juliana's disease (Crane, 2013, p. 172). In another hospital (Ndolange hospital), in the same Kagera region, three patients were reported in November 1983, according to NACP reports. By 1985, more cases were reported and confirmed by enzyme-linked immune-absorbent assay (ELISA) and Western blot. The characteristics of the first cases showed that they were adults of both sexes, involved in cross-border trade in the Tanzania-Uganda war, commercial sex workers, and truck drivers. These individuals accelerated the transmission to other parts of the country, from urban to rural areas (MoHCDGEC, 2005).

Urban areas were more affected, showing a prevalence of 30% in Bukoba town, and 0.5% in the rural Kagera region populations. Urban areas were also the country's first to be affected, with a higher prevalence than rural areas. The Tanzania-Uganda war was believed to have caused people mobility and social disruption, which favoured the introduction of HIV and its spread (MoHCDGEC, 2005). The disease was named 'Juliana', based on a label on clothes in fashion at that time among the businessmen and women imported from a neighbouring country.

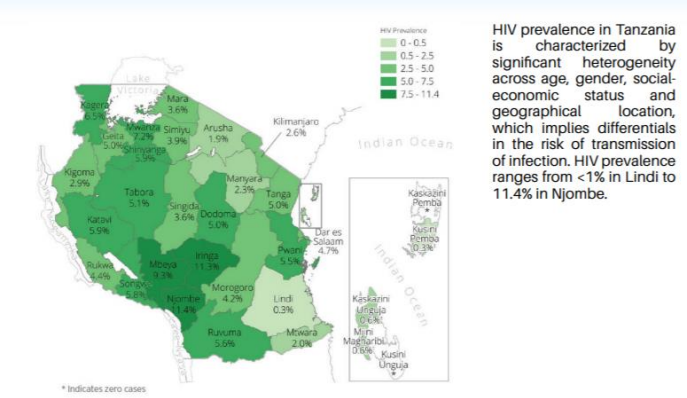
Kagera region continued to report an increasing number of AIDS patients compared to other regions between 1983-1987. By 1986, all regions had reported AIDS cases to the Ministry of health. However, there could have been underreporting due to inadequate clinical and laboratory services throughout the country. Additionally, there could have been multiple reporting of cases due to the same patients attending treatment at different hospitals in different parts of the country. There was also a lack of a robust AIDS surveillance system (MoHCDGEC, 2005). The epidemic in Tanzania is solely HIV-1; HIV-2 has not been reported. The genetic diversity test done in 1998 in the Dar es Salaam and Mbeya regions indicated three subtypes, HIV-1 subtype A, C, and D (MoHCDGEC, 2005).

Control measures were started with studies and research to assess the extent of HIV-1 infection in the general population. The National AIDS Control Programme

(NACP) was established in 1988 to co-ordinate all HIV/AIDS activities in Tanzania, therefore a link between the government actors and Non-Governmental Organisations (NGOs) in the fight against HIV/AIDS (MoHCDGEC, 2005). The risk factors for HIV infection were related to gender, age, socio-economic status, location, occupation, and low medical male circumcision. Some social-cultural practices have also been shown to contribute to an increased risk of infection (Tanzania Commission for AIDS [TACAIDS], 2017).

Tanzania HIV Impact Survey (THIS) was a household-based national survey conducted between October 2016 and August 2017 to measure the nation's response to HIV. It showed that the prevalence of HIV among adults 15-64 years in Tanzania was 5% (6.5% among females and 3.5% among males, which corresponded to about 1.4 million people living with HIV (TACAIDS, ZAC, 2018).

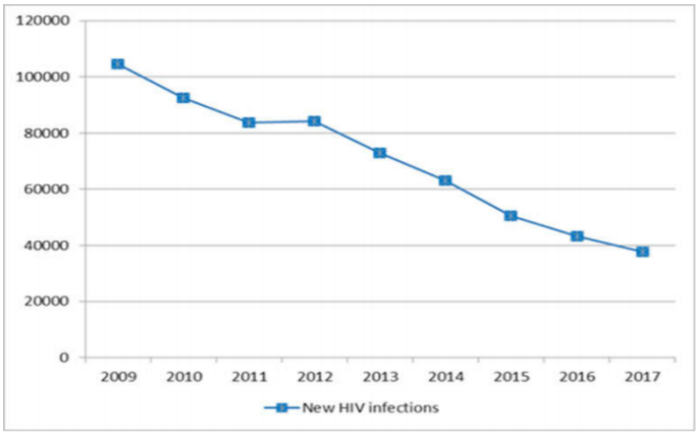
Figure 1:
Tanzania Map, the geographical prevalence of HIV. (Source: THIS 2016-2017)



This also showed an annual incidence of HIV among adults 15-64 in Tanzania to be 0.29% (0.4% among females and 0.17% among males), which is approximately 81,000 new cases of HIV annually among adults 15-64 years (TACAIDS, ZAC, 2018). The survey indicated that the HIV prevalence and incidence showed a stabilising epidemic, with the second and third 90 targets doing well. The goal of ending the epidemic by 2030 would be achieved if the target HIV testing were improved (TACAIDS, ZAC, 2018).

The UNAIDS 2018 report indicated that 1.6 million people were living with HIV (PLHIV) in the country, with an HIV incidence of 1.41% and a prevalence of 4.6%. It was also shown that 72,000 people were newly infected with HIV in 2018, a decline from 83,000 in 2010, and 24,000 people died from AIDS-related illnesses, a decline from 48,000 in 2010 (UNAIDS, 2018).

Figure 2:
Tanzania HIV incidence projections 2009-2017. (Source: HSHSP IV 2017-2022)



For the 90-90-90 targets by 2020 (where 90% of PLHIV know their HIV status, 90% of those who know their status access treatment, and 90% of those on treatment achieve viral load suppression); it was shown that if all PLHIV are to reach the 90-90-90 targets, 81% of them have to be on treatment, and 73% of all of PLHIV should be virally suppressed. In 2018, 78% of PLHIV knew their status, 71% were on treatment, and 62% of PLHIV were virally suppressed. Of all adults aged more than 15 years living with HIV (LHIV), 72% were on treatment, while only 65% of children aged 0-14 years LHIV were on treatment (UNAIDS, 2018). The Tanzania HIV Impact Survey (THIS) 2016-2017 had earlier indicated that 52.2% of PLHIV aged 15-64 knew their HIV status, 90.9% of those aged 15-64 LHIV who knew their HIV status gave self-report of current use of ART, and among those aged 15-64 who self-reported current use of ART, 87.7% were virally suppressed (TACAIDS, ZAC, 2018).

Furthermore, 93% of pregnant women LHIV accessed ARVs to prevent mother-to-child transmission (PMTCT) of the virus to their babies, preventing 14,000 new infections among new-born babies. For Early Infant Diagnosis (EID), the percentage of HIV-exposed infants tested for HIV before eight weeks of age was 47% (UNAIDS, 2018). Women were disproportionally affected, as indicated in the report. Of the 1,500,000 adults LHIV, 58.6% (880,000) were women. New HIV infections among young women 15-24 years were 16,000, more than double those among young men (with 7600 new infections). Moreover, HIV treatment was higher among women than men. It was indicated that

82% of adult women LHIV were on treatment, compared to 57% of men LHIV. It was also noted that only 43.08% of women and men 15-24 years old correctly identified ways of preventing the sexual transmission of HIV (UNAIDS, 2018). The percentage of PLHIV and Tuberculosis (TB) treated for both diseases increased from 29.5% in 2015 to 42.1% in 2017 (UNAIDS, 2018). The United Nations Children's Fund (UNICEF) has pointed out that children, adolescents, women, and key populations are disproportionately affected by HIV in Tanzania, with the country carrying 5% of the global burden of HIV among adolescents. However, the epidemic has been stable among teens 15-19 since 2008 (UNICEF, 2018).

The Ministry of Health Community Development Gender Elderly, and Children (MoHCDGEC), through the National AIDS Control Programme (NACP), has developed national guidelines for managing HIV and AIDS, which are regularly revised when required. The latest was published in 2017 as the adoption of WHO 2015 treatment guidelines which recommended treatment of all HIV-infected individuals at diagnosis irrespective of the disease stage (WHO, 2016). Based on the WHO guidelines, several revisions were done on HIV Testing Services (HTS), HIV testing and counselling for key populations, viral load testing, and testing for the diagnosis of viral load failure. Other revisions were on CD4 T lymphocyte testing, testing in pregnant women and their partners, pregnant and breastfeeding women on ART, and infants born to HIV-positive mothers (MoHCDGEC, 2017b). Guidelines on HIV and AIDS Service Delivery were provided, including HIV testing services and laboratory tests for the diagnosis and monitoring of HIV and AIDS. Several aspects related to HIV prevention were illustrated. Management of HIV Opportunistic infections and co-morbidities was discussed, and Paediatric HIV and AIDS-related conditions were highlighted. Prevention of mother-to-child transmission (PMTC) of HIV was discussed, including the history of PMTCT (MoHCDGEC, 2017b). The proper use of antiretroviral drugs was illustrated for adolescents, adults, and children. Adherence counselling to ART and retention across the continuum of care were elaborated.

Mental health conditions in HIV and AIDS were highlighted, nutrition in HIV and AIDS was discussed, and the importance of community-based HIV and AIDS services was shown. Supply chain management and rational use of HIV and AIDS commodities were explained. The significance of monitoring and evaluation of HIV and AIDS activities was given (MoHCDGEC, 2017b).

THE NATIONAL HIV/AIDS RESPONSE

The division of National Response in the Tanzania Commission for AIDS (TACAIDS) co-ordinates the multi-sectoral implementation of HIV/AIDS interventions in the country. The sectoral response is co-ordinated through the public and private sectors, civil society organisations, regions, local government authorities, and the community. TACAIDS also co-ordinates HIV/AIDS interventions targeting KVPs in the country (TACAIDS, 2017). The Ministry of Health (MoHCDGEC) has led the national health sector's response to HIV/AIDS since the beginning of the epidemic (MoHCDGEC, 2017a, p. 5). Implementation of the national response to the HIV/AIDS epidemic has been done through health sector strategic plans, published by MoHCDGEC through the NACP; the latest of which was published in 2017 as HSHSSP IV to be implemented between 2017 and 2022 and targeted at meeting the 90-90-90 global goals. The strategic plan is specific to the health sector and outlines the country's health sector's contribution toward its strategic vision to eliminate the AIDS epidemic as a public threat by 2030 (MoHCDGEC, 2017a, p. 7). Several achievements were seen in previous strategic plans, which were successful due to a partnership between the government and its development partners. The partnerships helped in getting financial and technical support through bilateral programmes; with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), The Global Fund, and the United Nations system (WHO, UNAIDS, UNICEF, UNFPA, and other UN programmes). Other partners included NGOs and Private foundations such as Clinton's Health Access Initiative (CHAI), Benjamin Mkapa Foundation (BMF), and Bill and Melinda Gates Foundation (BMGF) (MoHCDGEC, 2017a, p. 7).

Several HIV prevention activities have been in place. Various interventions were started, aiming at prevention, care, treatment, and support, with over 3000 health facilities registered for HIV care and treatment service delivery by 2015. HIV testing through Provider Initiated Testing (PIT) and Community-Based Testing and Counselling(CBTC) made it possible for 63% of adults and children LHIV to receive ARVs by June 2016 (MoHCDGEC, 2017b, p. 3). HIV testing services (HTS) include the full range of services

provided with HIV testing, which are counselling (pre and post-test), linkage to appropriate HIV prevention, treatment, and care; and other clinical services and coordination with laboratory services to support quality assurance and the delivery of accurate results (WHO, 2016b). Through HIV testing services (HTS), 52,2% of PLHIV aged 15-64 years knew their HIV status, including 55.9% of HIV-positive females and 45.3% of HIV-positive males. The strategic outcome was to have 95% of PLHIV be aware of their HIV status by 2022 (MoHCDGEC, 2017a, pp. 7, 18).

Condoms are available and accessible from public and private outlets and facilities. Condom programming is a national Multi-sector condom strategy developed in 2016, aiming at condom forecasting, promotion, and distribution in the country, with the involvement of the public and private sectors. Male condoms are available in health facilities, commercial outlets, and hotspots. Female condoms are less popular and not easily accessible. For the year 2016, the country's target for condom distribution was achieved (MoHCDGEC, 2017a, p. 20). However, the distribution mechanism needs to be strengthened to focus on all needy populations. The current strategy aims at having an outcome of 85% of women and men engaged in multiple sexual partnerships reporting using a condom at the last sexual intercourse (MoHCDGEC, 2017a, p. 21).

The WHO has promoted VMMC in 14 priority countries in eastern and southern Africa, with Kenya, Tanzania, and Gambella province in Ethiopia surpassing 80% coverage targets of 80% (WHO, 2016). Male circumcisions have been shown to reduce the incidence of HIV transmission by 50-60% globally (Harden, 2012, p. 241). Voluntary medical male circumcision (VMMC) services started in 2009 in 13 priority regions in Tanzania with low coverage of male circumcision and a high burden of HIV transmission. 2.2 million individuals (78.6%) were circumcised, but only two regions out of 13 attained a VMMC saturation coverage level of 80% (MoHCDGEC, 2017a, p. 8). The current strategic outcome is to attain a 90% male circumcision rate in all regions by 2022 (MoHCDGEC, 2017a, p. 24).

Since HIV is transmissible through blood (Harden, 2012, p. 83), blood safety is an essential part of HIV prevention. The tracking of the amount of safe blood collected, screened, and used for transfusion was not met in the previous strategic plan (MoHCDGEC, 2017a, p. 8). The national blood transfusion services were established in 2004 with a decentralised network of zonal blood banks. Blood is screened for Transfusion Transmissible Infections (TTIs) based on a rigorous quality assurance scheme. The strategic outcome is to have all (100%) donated blood units screened for STIs, including HIV, HBV, HCV, and syphilis, per the WHO quality assurance procedure by 2022 (MoHCDGEC, 2017a, pp. 25–26). STI management guidelines were updated in the third strategy, but STI services have low coverage (MoHCDGEC, 2017a, p. 24). The implementation of integrated management of STI/Reproductive Tract Infections (RTI) in HIV care and reproductive health services is still weak. Stock out of commodities is common, and there is an inadequate and irregular supply of STI test kits and pharmaceutical and medical supplies. Direct funding for STI services from the government and development partners is low. Low health-seeking behaviour, weak partner notifications, and poor management of infections in health facilities are common challenges. The current strategic outcome is to have the incidence of STIs in the general population and syphilis among pregnant women reduced by 50% by 2022 (MoHCDGEC, 2017a, p. 25).

Social and Behavioural Change Communication (SBCC) campaigns contributed to awareness-raising efforts aimed at behavioural change. There was a lack of effective monitoring, coverage gaps, and weak SBCC in the previous plan implementation. Prevention and care programmes for key and vulnerable populations (KVPs) have been established and include men who have sex with men (MSM), people who inject drugs (PWID), and female sex workers (FSW). National guidelines for guiding and harmonising the implementation of a comprehensive package of HIV and health interventions for KVPs were formulated and reviewed in 2017 (MoHCDGEC, 2017a, p. 22).

Monitoring and evaluation of the national system for KVPs were developed. Healthcare workers have been trained in the provision of KVP-friendly services. The targeted KVPs are sex workers, MSM, PWIDs, orphans and vulnerable children (OVC), adolescent girls and young women (AGYW), students in higher learning institutions who live in rented accommodations outside campuses, and mobile

populations such as long-distance truck drivers. People in mining and construction industries, fishing communities, plantation workers, displaced people, and people in closed settings, such as prisoners and people with disabilities, are other KVPs. The strategic outcome is increased access and utilisation of HIV services by KVPs (MoHCDGEC, 2017a, p. 22).

A successful first methadone clinic in sub-Saharan Africa has been established in Tanzania. Expanded Medication-Assisted Therapy (MAT) services are given at three clinics n Dar es Salaam with plans to scale up to a countrywide programme (MoHCDGEC, 2017a, p. 22). According to WHO guidelines, the use of ART is also one of the strategies to reduce HIV transmission (MoHCDGEC, 2017a, p. 7). Prevention of reproductive health cancers is a preventive measure against HIV infection. Human Papilloma Virus (HPV) and HIV have been associated with risk factors for cervical cancer. Therefore an implementation programme is in place, aiming at having 60% of female clients aged 30-50 years screened for cervical cancer using VIA and cryotherapy by 2022 (MoHCDGEC, 2017a, p. 28).

HIV AND AIDS CARE, TREATMENT, AND SUPPORT SERVICES

Tanzania has adopted the WHO 2015 guidelines for treating all people living with HIV (PLHIV) irrespective of disease stage (MoHCDGEC, 2017a, p. 8). In the WHO guidelines, countries are challenged to reach the Fast-Track targets for 2020, which include reducing the number of people acquiring HIV to less than 500,000 and reducing the number of people dying from HIV-related causes to fewer than 500,000 (WHO, 2016, p. 7). The strategic outcome for Tanzania is to have all (100%) of those who test positive at HTS be linked to HIV care, treatment, and support services by 2022 (MoHCDGEC, 2017a, p. 10). Global plan priority countries for PMTCT of HIV has helped increase the proportion of pregnant women LHIV who receive ARVs for PMTCT (WHO, 2016, p. 20). Option B+ for eliminating MTCT has also been adopted, where lifelong HAART for all HIV-infected pregnant women upon diagnosis, with 90% of HIV-infected pregnant women enrolled on ART in 2014, with a near-universal coverage in 2015 (MoHCDGEC, 2017a, p. 8). The percentage of HIV-exposed infants receiving a DNA-PCR test within two months after birth increased from 47% in 2013 to 82% in 2015. However, low male involvement and high loss to follow-up (LTFU) by mothers who started on ART during pregnancy posed a challenge, as about one-third of enrolled mothers defaulted by the end of 1 year (MoHCDGEC, 2017a, p. 9). During HSHSP IV, PLHIV will be placed on ART in adopting the WHO treat-all approach (MoHCDGEC, 2017a, p. 28).

The provision of comprehensive HIV care services is decentralised to local government councils, providing facility and community-based services. The number of facilities providing the services has increased. The strategic outcome is to have 95% of all individuals diagnosed with HIV enrolled in HIV care by the year 2022 (MoHCDGEC, 2017a, p. 29). In this strategy, 95% of all adults more than 15 years old diagnosed with HIV will be on ART by 2022. ART early treatment is known to prevent and markedly reduce HIV transmission.

For children, it is expected that all those below 15 years should be initiated on ART, and 90% of the eligible children should be retained on ART by 2022, while 95% of adolescents who are LHIV will be retained on ART by 2022 (MoHCDGEC, 2017a, pp. 30–31). MTCT of HIV is expected to be reduced from an estimated 8% in 2015 to 4% at the end of breastfeeding by 2022. Tanzania has achieved a 72% reduction in new paediatric HIV infections since 2009, which is the second-highest among the priority countries. This has resulted from focused efforts to eliminate MTCT 2012-2015 (MoHCDGEC, 2017a, p. 32). HIV co-infections and co-morbidities are expected to decline, with TB notification among PLHIV increasing from 2% in 2016 to 5% by 2022. The burden of other HIV co-infections and co-morbidities among PLHIV is expected to be reduced by 50% of the 2016 level. The THIMS 2016-2017 had shown that the prevalence of viral load suppression (VLS) among HIV-positive adults aged 15-64 was 52% (57.5% among females and 41.2% among males). In the current strategic plan, 95% of all PLHIV on ART are expected to achieve viral suppression by 2022 (MoHCDGEC, 2017a, p. 34). Improved identification, retention adherence, and psychological support to PLHIV through community-based HIV and AIDS services are expected by 2022 (MoHCDGEC, 2017a, p. 36). ARV community delivery model has been in place and has been shown to perform as well as the standard of care regarding the critical health indicator of virological failure (Geldsetzer et al., 2018).

A resilient and sustainable health system is required to support the national response. Quality improvement of HIV and AIDS services is expected to improve the performance and quality of HIV and AIDS services (MoHCDGEC, 2017a, p. 38). Additionally, the supply of medicines and commodities for STI/RTI, HIV, and AIDS at all levels will not be interrupted. Quality laboratory services provided for HIV/AIDS at all levels are expected (MoHCDGEC, 2017a, p. 41). Healthcare equipment maintenance is expected to be done on time to avoid interruption of services. A well-regulated monitored and evaluated programme with up-to-date research outcomes relevant to HIV and AIDS that addresses improved data quality and informs programme performance is expected (MoHCDGEC, 2017a, pp. 43–45). Strengthened community participation for quality community-based health services is another expected outcome (MoHCDGEC, 2017a, p. 46). Stigma, discrimination, and gender-based violence are expected to be reduced, aiming for the proportion of PLHIV who report experiencing stigma and discrimination from healthcare providers to be reduced from 40% to zero by 2022 (MoHCDGEC, 2017a, p. 47). A reduction in HIV-associated sexual and gender-based violence is expected. The effects of gender-based violence on survivors, especially women and young people, will be mitigated (MoHCDGEC, 2017a, p. 52).

Health sector workplace interventions are expected to increase access to comprehensive workplace interventions, focusing on HIV, TB, and HBV prevention, care, and support services by employees (MoHCDGEC, 2017a, p. 49). Male involvement in HIV prevention, care, treatment, and support for their health and that of their partners and families are expected to improve, while pre-exposure prophylaxis and self-testing will also be implemented (MoHCDGEC, 2017a, pp. 52–54). A study done in Dar es Salaam among female bar workers demonstrated that pre-exposure prophylaxis is highly acceptable in that at-risk population (Harling et al., 2019).

Several factors had to be considered for an exemplary implementation of the HSHSP strategy. These were governance from the national to village level, programme management and linkages at the regional and local government level, and collaborative, dialogue, and coordination partnerships. A strategic source of financing, monitoring, evaluation, and research will assist in getting the expected results and outcome (MoHCDGEC), 2017a, pp. 59–62).

CHALLENGES IN THE NATIONAL HIV/AIDS RESPONSE

The prevalence of HIV is high in key populations in both the mainland and Zanzibar, which means that extra efforts targeting the KVPs have to be in place. Common early marriage and childbearing among girls make them disproportionally vulnerable. It has been observed that 27% of girls aged 15-19 years are either pregnant or have had a child (UNICEF, 2018). Intervention measures targeting adolescent girls and young women must address this challenge. Girls 15-19 years in both urban and rural areas had been observed to have an HIV prevalence of 1.3%, compared to that of 0.7 in boys of the same age group. Comprehensive knowledge of HIV among females aged 15-24 years was higher (75.7%) than that of males of a similar age group (74.8%). Condom use among 15-24-year-old females was 46% compared to 49% in males of the same age group (UNAIDS, 2018). Although Zanzibar has a low prevalence of the HIV epidemic, key populations (KPs) are affected. The KPs include injecting drug users (16%), sex workers (10.8%), and men who have sex with men (12.4%). These groups face stigma and discrimination, and their access to appropriate, user-friendly services and information is limited (UNAIDS, 2018).

It has been observed that although key populations have multiple sexual partners and a high frequency of partner change, they demonstrate low condom usage. Additionally, there is evidence of overlapping sexual networks between KPs and the general population. Moreover, the prevalence of HIV infection among transgender people is unknown, and there is no official data for prisoners (Mpondo et al., 2017). According to UNICEF, the country is facing a health worker-to-population ratio challenge, which is more evident in the public sector. Stigma to patients on ARVs and drugs out of stock are additional challenges in the HIV/AIDS programme service delivery (UNICEF, 2018).
HIV/AIDS has increased the challenges facing the overall healthcare system. Healthcare personnel has been affected by HIV, leading to an additional burden on human resource in health. The health status and death caused by AIDS are reported to have reduced the healthcare workforce, productivity, and incomes in many communities (MoHCDGEC, 2017b). Non-adherence to antiretroviral

drugs has been reported and is more common among the young, the unemployed, those with low education levels, the male gender, those with higher CD 4 count levels, and those living in urban areas (Semvua et al., 2017). A high follow-up loss has been observed among PLHIV, leading to a 12-month retention rate of 74% (PEPFAR, 2018). Furthermore, the Global Fund reported a low HIV patient retention rate and treatment access, which makes it difficult for the country to reach the ambitious target of having 95% of PLHIV on ART by 2022. Additionally, gaps in programme management have been observed in monitoring drug stock levels due to human resource constraints. Supply chain funding gaps, government debts to the Medical Stores Department, and governance arrangements are areas that need improvement (The Global Fund, 2018).

In the 2018 annual report, TACAIDS reported other challenges, which included inadequate funds, delay in fund disbursement, inadequate staff, and lack of sustainability plans for foreign-funded HIV and AIDS services (TACAIDS, 2017, p. 32). The decline in the U.S. government and other donations to the Global Fund (Crane, 2013, p. 173), is likely to affect the national response success. Donor dependence should be reduced, and efforts to raise domestic funds should be increased. The AIDS Trust Fund, established in 2015 for fund mobilisation and advocacy, should be expected to function in that capacity. Plans have to be in place to address the identified challenges.

SUSTAINABILITY OF THE NATIONAL RESPONSE

Sustainability will depend on continued political leadership and adequate funding. Tanzania has received substantial external funds for financing the national HIV/AIDS response, particularly after the establishment of PEPFAR and the Global Fund. The whole health system has been strengthened with funds from other sources. However, the country's overall performance in the sustainability aspect demonstrates that there should be ongoing investments in all sustainability domains.

Moreover, Tanzania's investments in HIV and the health sector, in general, have prevented it from reaching its potential for sustaining the national response (PEPFAR, 2019, p. 18). The PEPFAR sustainability index (SID) tool indicated that four SID elements were registered as unsustainable and required significant investment. These were service delivery which depended primarily on PEPFAR and the Global Fund, laboratory services, domestic resource mobilisation, and technical and allocative efficiencies (PEPFAR, 2019, p. 22).

CONCLUSIONS

Tanzania has a high burden of HIV/AIDS, experiencing a generalised epidemic on the mainland and a concentrated epidemic in Zanzibar. Historical perspectives indicate that the onset of the epidemic coincided with that of other countries in Africa and other parts of the world, with the first patients experiencing similar clinical presentations. Since the onset of the epidemic, the national response has been guided by WHO guidelines for the prevention, treatment, and care of PLHIV. The national response has faced several challenges, most arising from weaknesses in the health system. To have a sustainable HIV/AIDS response, the challenges must be addressed, particularly concerning financing and the health workforce.

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