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Chapter

Understanding the Hygiene Needs of People Living with HIV and AIDs in Southern African Developing Community (SADC) Countries

Ephias M. Makaudze

Abstract

This paper seeks to draw attention to the significance of integrating hygiene practices to HIV and AIDs programs in Southern African Developing Countries (SADC)—a region severely burdened by the disease. Integrating hygiene, in particular the habit of handwashing with soap and water, can reduce mortality rates and improve the livelihoods of people living with HIV and AIDS (PLWHA)—akin to Florence Nightingale’s moment (1850s). The paper uses survey data attained from PLWHA (South Africa) as case point to provide empirical views by PLWHA regarding their views and perceptions about hygiene practices and significance. Key observations are that: PLWHA lack sufficient knowledge on handwashing practices and apparently ignorant about their exposure and extent of vulnerability to opportunistic infections. This paper concludes by making a call for integration of hygiene (especially handwashing with soap and water) as part and parcel of HIV and AIDS programs as this will positively impact livelihoods of PLWHA in SADC. The paper ends continuous monitoring of WASH programs across SADC new 90-90-90 water-sanitation-hygiene indicator scoreboard necessary for continuous monitoring of WASH programs across SADC and equally other developing countries.

Keywords: hygiene practices, HIV and AIDS, PLWHA (people living with HIV and AIDS), WASH (water sanitation and hygiene), southern African Development Community (SADC)

1. Introduction

Is Southern African Development Community (SADC) region winning the ‘war’ against HIV and AIDs? Maybe not. Most of the SADC countries remain heavily burdened with HIV and AIDS epidemic. Statistics at a glance indicate the region is fighting a losing battle as it continues to endure the highest HIV and AIDs prevalence (11.7%) in the world [15]. An estimated 15.3 million people are infected with the virus including 1.4 million children (**Table 1**). The prevalence is higher in women (53.1%) within the reproductive age group of 15–49 years. New infections, though showing a declining trend, remain high with more than 600,000 people

People living with HIV	15.3 million
Adults HIV prevalence	12.9%
Women HIV prevalence	53.1%
New HIV infections	620,000
AIDs-related deaths	530,000
Adults on antiretroviral treatment	8.6 million

Source: UNAIDS [15].

Table 1.
SADC HIV and AIDs statistics at a glance 2016.

infected with HIV virus and more than 500,000 people having died due to HIV in 2016. About 7.6 million children have been orphaned by disease and this in turn feeds into other socio-economic problems such as, the observed increase in the number of street kids, drug abuse, prostitution, gangs and gun violence, etc. In addition access to antiretroviral treatment (ART) remains limited in the region with only 48.2% receiving treatment.

A number of factors can be attributed to the high prevalence of HIV and AIDS in SADC region and key among them include: acute poverty especially in urban slums and associated problems of high crime rate, rampant prostitution, sexual violence, sexually transmitted diseases and infections; high mobility and influx of migrants particularly from neighbouring countries to South Africa; social depravation and high inequality within the region; limited and uneven access to quality medical care.

UN-Habitat [13] predicts that by 2020 a majority of people (>60%) in Africa would be living in major cities in search for employment and better life. The trend is equally observed in SADC countries, where most of the major cities are currently experiencing a boom in urban population. Correlated with increasing urban population is the proliferation of urban slum settlements and the resultant intensification of poverty as most of the new urbanites are not formally employed. Slum settlements generally consists of haphazardly scattered and overcrowded dwelling units characterised by lack of reliable supply of clean water, safe sanitation, hygienic living, reliable electricity, law enforcement and other basic services.

A number of studies indicate that the highest proportion of PLWHA reside in slum settlements [10, 12] (AIDS Foundation 2010). For instance **Table 2** indicates the settlement pattern of PLWHA in South Africa. As observed, a majority of PLWHA within 15–49 years age group predominantly dwell in poor urban slum settlements (25.8%), followed by rural slums (17.3%). In general, these settlement patterns have direct implications on WASH (water, sanitation and hygiene) provision.

This remainder of this paper is structured as follows: Section 2 provides an overview of WASH in SADC including links between HIV/AIDS and WASH; Section 3 discusses how hygiene matters for PLWHA; Section 4 showcases anecdotal evidence

Type of settlement	HIV+ (whole sample)	HIV prevalence (15–49)
Urban formal	9.1%	13.9%
Urban slum	17.6%	25.8%
Rural formal	9.9%	13.9%
Rural slum	11.6%	17.3%

Source: Tomlison [12].

Table 2.
Distribution of PLWHA in urban and rural settlements in South Africa.

based on empirical views, knowledge, perceptions and understanding of hygiene needs by PLWHA in South Africa and Section 5 concludes.

2. Overview of WASH in SADC

Hygiene practice has long been recognised as a critical component of public health programs associated with WASH. Yet despite its critical importance, hygiene has not received much priority in WASH policy programs. Under MDG (2000–2015) water and sanitation received global focus including high research priority with well-defined targets. However, under the new SDGs, significance of hygiene is recognised and explicitly included as part and parcel of WASH. Specifically, SDG target 6.2 represents the increasing recognition and role of hygiene and its close links with sanitation. Hygiene is multifaceted as it can comprise many aspects (e.g. handwashing, menstrual hygiene and food hygiene, etc.) and this makes it difficult to integrate measure and/or monitor performance WaterAID [16].

WASH practitioners have until recently identified handwashing with soap and water as a top priority in all hygiene settings, and a suitable indicator for national and global monitoring [18]. This new global SDG indicator for handwashing is defined as the ‘*proportion of population with handwashing facilities with soap and water at home*’. Handwashing facilities consist an array of devices such as, sink with tap water, buckets with taps, tippy-taps and portable basins, etc. Bar soap, liquid soap, powder detergent and soapy water all count as soap for monitoring purposes. In other cases, ashes, soil, sand and other materials are often used as handwashing soap substitutes, but these are less effective than soap and therefore counted as limited handwashing facilities.

The WHO/UNICEF’s Joint Monitoring Program (JMP) has stepped up efforts to develop ‘handwashing with soap and water’ as primary indicator for global monitoring of hygiene under the SDGs. As a result JMP has recently developed a new ‘ladder’ intended to benchmark and compare progress in hygiene provision across countries. The new hygiene ladder is shown in **Table 3** illustrating three hygiene service levels: first, the *basic level* which is fulfilled when the household has a handwashing facility with soap and water available on premises; second, *limited level* which is met when the household has facility on premises but lacks water and soap; and third, *no facility* occurs when the household has no any form of handwashing available on his/her premises.

Using this approach, JMP (under WHO/UNICEF [18]) conducted baseline survey to assess hygiene provision worldwide. The results indicate that the least developing countries (SADC region included), 27% of the population had access to ‘handwashing facilities with soap and water’ on premises, while 26% had handwashing facilities but lacking soap or water, and the rest (47%) had no facility.

Services level	Level defined
Basic level	Availability of handwashing facility on premises with soap and water; soap devices include bar soap, powder detergents, soapy water
Limited level	Availability of handwashing facility on premises without soap and water; non-soap devices like ashes, sand are used instead
No facility	No handwashing on premises

Source: WHO/UNICEF [18].

Table 3.
 The new JMP ladder for hygiene.

The graphic results are shown in **Figure 1**, showing the proportion of people with handwashing facilities including soap and water at home across different countries. It's striking to observe that across all SADC countries less than 50% of population have handwashing facilities with soap and water at their premises. The result imply dire implications especially for PLWHA. It is reasonable to infer that because of limited access to safe sanitation (see **Table 4**), many PLWHA are succumbing to communicable diseases predominantly due to lack of hygienic living.

2.1 HIV/AIDS link with WASH

Where is the link between HIV/AIDS and WASH issues? HIV and AIDS is not a waterborne disease nor is it spread via poor hygiene-related diseases like diarrhoea, typhoid and cholera [6, 7]. On one hand HIV and AIDS is principally a sexually transmitted disease, while on the other hand, water is a renewable resource whose availability depends on a variety of natural geographic and climatic factors. Likewise, sanitation and hygiene practices appear completely unrelated to HIV. Ostensibly, on face value, HIV and WASH issues appear distantly unrelated.

To the contrary, there are important links between HIV/AIDS and water/sanitation/hygiene with strong bearing on efficient provision and delivery of WASH services by municipalities [1].

First, AIDS kills by destroying the immune system of the body—rendering the body highly susceptible to common diseases. As a result AIDS victims die after succumbing to one or more of “opportunistic diseases” especially waterborne diseases such as diarrhoea, cholera, dysentery, typhoid, etc. For example, diarrhoea rates are estimated to be 2–6 times higher in PLWHA than in non-infected and rates of acute and persistent diarrhoea are twice as high in PLWHA compared to the non-infected ([5] in [17]).

Second, as PLWHA become frail, bed-ridden and increasingly incapacitated their demand for WASH (Makaudze & Gelles, 2015) services drastically increases [9]. For instance, they would require regular bathing, frequent washing of soiled linen and clothes, clean hygiene living environment with well-managed solid waste disposal. Safe sanitation involves proper handling and disposal of human excreta (faeces, urine, menstrual blood, and sweat), proper management of wastes (including trash, wastewater, sewage and hazardous wastes) and proper control of disease vectors such as mosquitoes and flies [14, 17]. However providing such essential WASH services for PLWHA in slum and rural settlements is a formidable challenge.

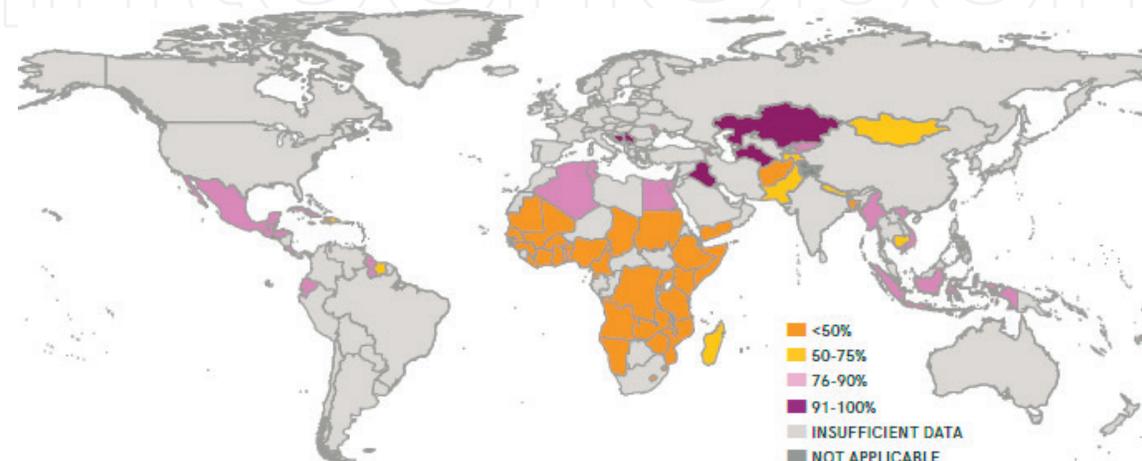


Figure 1.

Proportion of national population with handwashing facilities including soap and water at home, 2015. Source: WHO/UNICEF [15].

Country	Access to clean water (%)	Access to safe sanitation (%)	% hygiene
Angola	48	52	–
Botswana	95	65	–
Lesotho	82	30	–
Malawi	90	41	–
Madagascar	52	12	–
Mauritius	100	94	–
Mozambique	51	20	–
Namibia	90	35	–
South Africa	92	68	–
Swaziland	75	58	–
Tanzania	56	15	–
Zambia	66	44	–
Zimbabwe	78	38	–
Average	78	44	–

Source: UNAIDS Data Compilation [15].

Table 4.
 WASH provision across SADC countries.

Third, hygiene practice that predominantly involves handwashing with soap and water is not a common practice among PLWHA. If the practice is routinely conducted at critical times, handwashing can effectively reduce diarrhoea instances. Some studies conducted in developing countries concluded that handwashing practices with soap can lower the risk of diarrhoea by 42–44% [2, 3].

Menstruation management for women living with HIV and AIDs is another important aspect that requires shrewd hygiene standards. Menstrual blood of HIV positive women contains the virus and can be hazardous risk to family members, caregivers and other people if not properly handled and managed.

Despite the potential benefits of WASH practices, meeting the special needs of PLWHA remains an enormous challenge in many SADC countries. While significant progress has been achieved in water and sanitation provision, it is hygiene component of WASH that has not received much policy attention and priority (see **Table 4**). Hygiene practice cuts across water and sanitation sectors and its efficient provision will benefit everyone, and incorporating hygiene into HIV programmes will provide additional opportunities to improve overall public health outcomes in SADC region.

The paper seeks to draw attention to the essence of integrating hygiene practices to HIV and AIDs programs in SADC and other developing countries equally burdened by the disease. Integrating hygiene practices could have a profound impact on reducing mortality and improving the livelihoods of PLWHA.

3. Hygiene is critical for PLWHA

A small but growing body of literature is emerging recognising the need to integrate hygiene practices in HIV and AIDs programmes in SADC and equally other developing countries. To gain better understanding of hygiene practices, the following questions are interrogated: first, what is hygiene and how can it be integrated as

part of WASH programs? Second, which hygiene practices are critical to PLWHAs? Third, what are perceptions and understanding of hygiene practices by PLWHA?

Hygiene can be defined as a set of deliberate actions undertaken to preserve health, prevent sickness and enhance individual or community's safety and health security. Simply defined, it is the "deliberate act and habit of preserving health security". The actions may be instituted and/or enforced by the government in the interest of preserving individual or public health security. The World Health Organisation [17] defines hygiene practices as conditions that "help maintain health and prevent the spread of diseases". Personal characteristics, socio-economic and cultural factors play a role in the adoption of hygiene practices.

The term hygiene originated from the ancient Greek and basically means "that which is healthy". Its name is coined from the Greek "god of health" called Hygeia. Today the term is widely applied particularly in WASH where its meaning has been expanded to include issues such as; personal hygiene, water hygiene, sanitation hygiene, food hygiene, public hygiene, environmental hygiene, etc.

Florence Nightingale (1820–1910), regarded as the godmother of hygiene, was the "first" to apply hygiene practices to the wounded combatants during the Crimean War (1853–1856). Nightingale's approach included providing proper ventilation, heating, light, clean environment, clean beds and bedding, personal hygiene, food and nutrition hygiene. What underlies the significance of Nightingale's approach was to facilitate and provide a conducive environment that resulted in lowering mortality rates by two-thirds. Her work provoked such profound effect that sparked worldwide healthcare reforms. It is the Nightingale's moment that we seek to apply by facilitating and promoting hygiene practices with the potential to reduce mortality rates of PLWHA. Because a majority of PLWHA dwell in rural and urban slum settlements (as discussed earlier) where they face deplorable living conditions marked by serious lack of safe sanitation, improvement in hygiene practices is critical for the sustenance of livelihoods of PLWHA.

3.1 Essential hygiene practices for PLWHA

This section provides a brief overview of the essential hygiene practices critical for PLWHA in SADC. The main hygiene components that need to be integrated in HIV and AIDS programs include (but not limited to) water hygiene, sanitation hygiene and personal hygiene and these are discussed below (see [17] for detailed discussion).

3.1.1 Water hygiene

Quality water is unavailable in many slum and rural settlements across SADC countries. In some cases water may be available but often untreated or contaminated—posing a high risk to PLWHA. Several affordable technologies are available for treating water and these include water chlorination, filtration, proper boiling, solar disinfection and ultraviolet radiation [17]. Such low-cost strategies for water treatment at the household level can greatly improve the microbial quality of water and can reduce diarrhoeal instance by 30–40%, achieving outcomes [11, 14, 17].

Ideal water hygiene can be regarded as water that has been subjected to such treatment as boiling, chlorination, filtration, solar disinfection including safe storage facilities. Water boiling is perhaps the most commonly popular and convenient approach especially for rural households where there is a general lack of electricity. Besides water boiling, chlorination is another widely practised water treatment especially at community level. Chlorinated water can be safe for drinking up to 7 days. A variety of different chemical substances can be used for water chlorination,

e.g. sodium hypochlorite, (a bleaching powder), calcium hypochlorite or sodium dichloroisocyanurate (NaDCC) [17].

NaDCC tablets are increasingly being used for routine drinking water treatment in especially in urban areas. The tablets provide cheap alternative chlorine source for use in the safe water system. In comparison to the chlorine solution, the tablets have benefits such as low cost, long shelf life, resistance to sunlight degradation, single-use package easy to distribute due to low weight [17].

Solar disinfection (SODIS) is another water hygiene practise gaining popularity in developing countries. SODIS uses UV-A radiation from the sun for treating water. Because solar energy is easily available across SADC countries, SODIS can be used as a cheaply available water treatment approach. Unlike chlorination methods (discussed above), SODIS does not affect the colour, taste, or odour of the water. However the approach has distinct disadvantages; can only be used when the water is clear (and not turbid water); requires small transparent plastic bottles (e.g. 1–2 l); requires long periods for effective treatment (6 hours in bright sun or 2 days in cloudy weather) and treating large quantities of water is problematic as this would require large plastic containers.

3.1.2 Sanitation hygiene

Ideal hygiene sanitation for PLWHA can be defined as a facility with infrastructure which is safe, reliable, private, protected from the weather, well-ventilated, minimum smells, easily accessible, access clean, minimises the risk of spreading sanitation-related diseases. In particular, hygiene sanitation requires proper handling and disposal of human excreta (faeces, urine, menstrual blood, and sweat), proper management of wastes (including trash, wastewater, sewage and hazardous wastes) and proper control of disease vectors such as flies and pests.

HIV/AIDS policy programs in many SADC countries have not prioritised the provision of hygienic sanitation particularly in slum settlements that are essentially convenient for PLWHA. For instance, a significant proportion (>20%) of households in slum settlements in South Africa still use the condemned bucket system or bushes and open space for defecation [4, 8].

4. Empirical views on hygiene by PLWA: case of South Africa

The results presented below are intended to showcase the views and understanding of hygiene practices by PLWHA in South Africa. The results are drawn from a research grant conducted by the author as one of the principal researchers and supported by Water Research Commission (WRC, 2009–2011). The study was based on 485 HIV and AIDs individuals drawn from three different types of settlements (rural, peri-urban and urban slums) and sampled from three selected municipal districts of Khayelitsha (Western Cape Province), Ukhahlamba (Eastern Cape Province) and Groblersdal (Limpopo Province). The district of Khayelitsha typically represents urban slum type of settlements, while on the other hand, the districts of Ukhahlamba and Groblersdal represent rural and peri-urban type of settlements respectively. The results are reproduced in this paper (courtesy of WRC) to provide empirical anecdotal evidence on hygiene practices and interpretation in the lens of PLWHA in South Africa. In other words, the results seek to demonstrate perceptions by PLWHA regarding: their understanding of hygiene practices, views on effectiveness of hygiene campaigns by local municipalities and how hygiene improvement is likely to impact their livelihoods.

	All	Khayelitsha	Ukhahlamba	Groblersdal
Type of settlement		Urban slum	Rural	Peri-urban
N=	485	198	175	112
Wash hands before eating	32.2%	42.9%	38.9%	2.7%
Wash hands after toilet use	7.0%	12.8%	4.6%	1.0%
Wash hands with soap	3.7%	8.1%	1.1%	0.0%
Wash your body regularly	34.0%	29.3%	24.0%	58.1%
Clean toilet with detergents	1.4%	2.5%	1.1%	0.0%
Other	9.7%	2.5%	0.6%	36.6%

Source: Water Research Commission [8].

Table 5.
Understanding hygienic practices by PLWHA in South Africa.

The results in **Table 5** indicate “hygiene practices” undertaken by PLWHA across the three sampled areas. Results show most interviewees indicating ‘wash your body regularly’ (34%) as the most dominant hygiene practice, followed by ‘wash hands before eating’ (32.2%). A rather surprising result is the practice of ‘wash hands after toilet use’, with less than 10% indicating this practice. The smallest proportion was in Groblersdal and the highest in Khayelitsha. Some differences exist between the three areas with those in Khayelitsha being much more focused on washing regularly (than in the other two areas) and having a much lower percentage regarding washing hands before eating as important. The result suggest serious lack of knowledge by PLWHA of crucial hygiene practices of handwashing during critical times.

In recent years, local municipalities have mounted several campaigns aimed at improving provision of general public health and security. **Table 6** shows that more than half of the all interviewees were aware of any such campaigns. Khayelitsha had the least awareness (31.3%) and Groblersdal the highest (>90%). Overall, for those individuals who indicated awareness of such campaigns, there was the general perception the campaigns were not effective.

	All	Khayelitsha	Ukhahlamba	Groblersdal
Type of settlement		Urban slum	Rural	Peri-urban
N=	485	198	175	112
Aware of campaigns? (Yes)	54.4%	31.3%	57.1%	91.1%
Very effective	19.2%	3.5%	22.3%	42.0%
Effective	25.4%	12.6%	27.4%	44.6%
Not effective	5.1%	7.1%	0.6%	3.6%
Should they target people living with HIV/AIDS? (Yes)	87.4%	88.4%	81.1%	95.5%
How to keep body clean	1.9%	1.5%	3.4%	0.0%
Education on water & sanitation	47.8%	46.4%	56.0%	37.5%
How to avoid opportunistic infection	1.0%	1.5%	1.1%	0.0%
Other	18.8%	3.0%	11.4%	58.0%

Source: Water Research Commission [8].

Table 6.
Awareness of hygiene campaigns and perceptions on effectiveness by PLWHA.

	All	Khayelitsha	Ukhahlamba	Groblersdal
Type of settlement		Urban slum	Rural	Peri-urban
Will improve health status	31.1%	38.4%	22.9%	42.0%
Will reduce opportunistic infection	9.4%	9.6%	9.1%	18.8%
Will reduce vulnerability to water-borne diseases	12.5%	9.5%	16.0%	17.9%
Likely to live longer	24.4%	15.2%	34.9%	8.9%
Enhances my dignity	16.1%	17.7%	15.4%	10.7%
Other	2.4%	3.0%	1.7%	0.0%

Source: Water Research Commission [8].

Table 7.
 Perceptions by PLWHA on likely impact of improved hygiene practices.

Overall, more than 80% of interviewees thought the campaigns should target PLWHA. Of these, the overwhelming view was that such campaigns should target educating people on water and sanitation.

The results in **Table 7** indicate perceptions by PLWHA on the potential impact of improved provision of hygiene practices. The interviewees' dominant view was that improvement in hygiene practices will improve their health status—Nightingale's moment. Results also indicate that interviewees think they are likely to live longer (24.4%) with improvements in hygiene practices and in addition this could also enhance dignity (16.1%). A low proportion (<10%) of interviewees expressed the view that improved hygiene practices could reduce opportunistic infection or reduce vulnerability to water-borne diseases (12.5%). This result imply the lack of knowledge by PLWHA on how vulnerable they are to unhygienic practices.

5. Implications of empirical results

The empirical results discussed above help to highlight some important implications regarding perceptions on hygiene practices by PLWHA in general. Although hard and fast statements may not be drawn, the results nonetheless underlie important insights:

a. *lack of sufficient knowledge on handwashing practices*

- The results point to serious lack of sufficient knowledge on how “handwashing” as a hygiene practice, can have such a profound effect on the health status of PLWHA. Handwashing is one of the interventions that promote hygiene, since it can stop the transmission of pathogens that cause various diseases (e.g. diarrhoea, cholera, etc.). If done properly and at critical times, handwashing with soap and water (basic level) or even abrasive material such as ashes (limited level) is effective in preventing the spread of communicable diseases (e.g. diarrhoea, cholera). Studies conducted in developing countries have concluded that handwashing can significantly reduce the mortality of PLWHA.

b. *health campaigns on HIV/AIDS must integrate WASH*

- The approach by most governments in SADC has been to treat HIV and AIDS as a purely health issue and completely divorced from non-health yet complementary sectors (e.g. WASH). Most HIV and AIDS campaign programs rolled out by governments are predominantly focussed on preventive efforts and measures particularly aimed at changing sexual behaviour; e.g. the ABC (**abstain-be-faithful-condom**) campaigns. Such approaches have downplayed the complementary role other essential non-health sectors can play in reducing the impact of HIV and AIDS. The government Departments of Health and Water and Sanitation need to work hand-in-hand in coordinating or developing joint national programs that integrate WASH as part and parcel of HIV and AIDS programs targeting PLWHA.

c. lack of knowledge on extent of vulnerability to opportunistic infections by PLWHA

- PLWHA seem to be ignorant about how vulnerable they are to opportunistic infections especially waterborne and skin diseases because of compromised immuno-system. Diarrhoea in particular is the number one killer. This result emphasises the need to raise awareness and educational campaigns among PLWHA about vulnerability to opportunistic infections and significant role hygiene practices especially the role handwashing with soap and water can play in reducing morbidity and mortality rates.

d. improvement in hygiene practices will provide “Nightingale’s moment” to PLWHA

- Perhaps the most important result by PLWHA is that improvement in hygiene practices will improve health status. This calls upon all stakeholders in health and WASH sectors across SADC countries to integrate hygiene practices particularly handwashing as part and parcel of national HIV and AIDS policy programs. The desired outcome is that such approach will provide ‘Nightingale’s moment’ to PLWHA.

e. implement new 90-90-90 water-sanitation-hygiene indicator scoreboard

- The 90-90-90 is an ambitious treatment program initiated by UNAIDS working to end the AIDS epidemic by 2020. The program stipulates that by 2020, 90% of all PLWHA will know their HIV status; by 2020, 90% of all PLWHA will receive sustained antiretroviral therapy and by 2020, 90% of all people receiving antiretroviral therapy will have viral suppression. Following a similar approach, it could be prudent to launch 90-90-90 water-sanitation-hygiene indicator scoreboard by 2020. This could interpreted as by 2020, across all SADC countries (and/or developing countries) 90% of population must have access to clean water; 90% of population must use safe sanitation and 90% of population must have handwashing facilities with soap and water on the premises. With many SADC countries lagging behind in sanitation provision, special emphasis can be devoted to promote ‘handwashing with water and soap’ campaigns targeting PLWHA.

6. Conclusion

There is overwhelming evidence that improvement in hygiene practices will reduce opportunistic infection especially water borne diseases. Hygiene practices particularly handwashing with soap and water have the potential to reduce

morbidity and mortality rates among PLWHA. However despite the potential benefits of hygiene practices, full implementation and meeting the special needs of PLWHA remains an enormous challenge in SADC. While significant progress has been achieved in water and sanitation provision it is hygiene component of WASH that has not received much policy attention and/or priority. This paper has made a case calling for the integration of hygiene practices (particularly handwashing with soap and water) in HIV and AIDS programs as this will provide additional opportunities to improve health outcomes and reduce mortality of PLWHA akin to Nightangle's moment across SADC countries.

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