Introduction

Since the first discovery of Acquired Immune Deficiency Syndrome (AIDS), the end stage of human immunodeficiency virus (HIV), in 1981, the epidemic spread rapidly among humans, with its most devastating effect in sub-Saharan Africa [1]. Several groups continue to be at risk of HIV infection in many parts of the world, including militaries. The military's working environment, ethos, demographic and socio-economic factors, including its young population, longer periods spent away from family due to deployment and risk-taking characteristics, render service members more vulnerable to sexually transmitted infections, including HIV [2,3]. Unlike the general population, information and data on HIV and AIDS in the military, including prevalence rates, is scarce and inaccessible. However, several authors have either reported prevalence rates equal to or higher than the general population (ref).

Nonetheless, it is evident that HIV and AIDS can have severe implications for service members, peacekeepers, security, peacekeeping operations, host and contributing regions [3-6].To mitigate the effect of this epidemic and maintain high health standards, most militaries have developed policies to guide decision making, implement disease management strategies and control the epidemic.[6] Commonly, the policies highlight issues on recruitment and enlistment, deployment, and HIV testing, treatment, care and support services. However, there have been discrepancies in the contents and implementation of these policies. For instance while many of these policies prevent HIV positive persons from recruitment, enlistment and deployment, a few suggest otherwise. Again, implementation procedures of the policies differ greatly across different militaries in the world.

The aim of this evaluation is to highlight and analyze these discrepancies and present the findings as vital information for militaries developing new written HIV policies to inform HIV services,

interventions and key decisions, including recruitment and deployment, for example the Ghana Armed Forces (GAF). Official written policies for militaries indicate a greater commitment of militaries towards efforts to combat HIV and AIDS and its attendant issues. [6] These policies also serve as workplace policies to guard against the adverse effect of HIV and AIDS on persons living with the infection, including stigma and discrimination. [7]

Methodology

An evaluation of the discrepancies across military policies on recruitment, enlistment and deployment informed the evaluation. The core objectives were to:

1. Compare and understand the contents and implementation of different military HIV policies;
2. Find similarities and differences among military HIV policies, national legislations and international HIV policies; and
3. Highlight gaps in the policies and recommend ways of addressing them.

Analysis of the contents of publications, policies, legislation, court proceedings, news articles, and other secondary resources, obtained from official government and institutional online platforms and peer reviewed journals, was the method used for the evaluation. The main documents used for the evaluation include HIV and AIDS policies of the South Africa National Defence Force (SANDF), the USA Department of Defense (DOD), UN Department of Peacekeeping Operations (UNDPKO) and ILO, national HIV and AIDS strategic plans and legislations of SA and the USA. SA has one of the highest HIV prevalence in the world. Again, SANDF has engaged in legal battles surrounding the enlistment and deployment of PLHIV. The USA is among the top five militaries with the largest active force in the world. The USA also has one of the most advanced HIV

programs in the world. Comparing policies from these two countries with unique experiences provides an opportunity to generate vital information on the subject of evaluation. The contents and implementation of the military policies in relation to other policies and legislations were reviewed. A tabular comparative analysis of the information retrieved from the review was completed. The evaluation followed the framework adapted from the six-step CDC Framework for Evaluation in Public Health. [8] This is shown in figure 1.

Results

The evaluation categorized the results under the two policies: 1. Recruitment and enlistment; and 2. Deployment.

Recruitment and enlistment

The SANDF and US DOD policies on recruitment and enlistment were compared with national policies and legislations on employment from the two countries. These policies were also compared with the ILO policy on HIV and employment. The results showed that, while the SANDF policy permits the recruitment of HIV positive applicants, the US DOD policy does not. Both militaries conduct mandatory pre-employment health assessments including HIV Testing. However, both national policies and employment legislation discourages discrimination against persons living with HIV. The South Africa national policy, however, permits discrimination based on the job requirement. The US national policy and legislation also permits mandatory medical exams if they are proven to be job related. The ILO policy strictly rejects discrimination in any form and rather upholds human rights and fundamental freedoms.

Deployment

The SANDF policy explicitly states that HIV positive service members can deploy while the US DOD policy cautiously states that HIV positive service members with evidence of clinical illness or immunological deficiency do not deploy. Both policies support mandatory pre-deployment health assessments. Again, HIV positive service members are retained and offered treatment and care services. However, the US DOD policy separates or retires unfit service members after 12 months of consecutive non-deployment. Again, both national policies and legislation discourage discrimination even though South Africa permits discrimination based on the job requirement. The UN peacekeeping policy requires mandatory comprehensive pre-deployment health assessment in accordance with UN medical standards. However, voluntary confidential HIV counseling and testing is recommended. Further, the UN policy repatriates service members with pre-existing medical conditions and pays no compensation for death, injury or illness which is due to pre-existing medical conditions or not mission-related.

Discussion

Recruitment and enlistment

SANDF was obliged to develop a new policy that permitted the recruitment and enlistment of HIV positive persons after the old policy was deemed unconstitutional and discriminatory by a court. [3,9] SA's position is unique since most militaries in sub-Saharan Africa continue to exclude HIV positive applicants from entry into the service. [6] However, implementation of this policy has been problematic with SANDF being accused severally of deliberate efforts to exclude HIV positive applicants. A news article in 2014 for instance indicated that SANDF continued to exclude HIV positive applicants despite the court order [10]. Again, SANDF lost another legal battle in 2014 in the case of Dwenga and Others versus Surgeon General of the South African Military Health

Services (SAMHS) and Others in which it was found that SANDF implemented the new policy in a way that precluded HIV positive applicants[11]. This makes the position of SANDF no different from the US DOD. The US DOD Instruction 6485.1[12] denies entry for HIV positive applicants. Like other militaries, they believe prospective applicants have to be free from contagious diseases and medical conditions and/or physical defects that may impede duty, able to complete training and work without environmental limitations and without aggravating existing medical conditions[13]. However, this has been perceived as one of the ways through which institutions shift the economic burden of HIV and AIDS on government 42.

On the contrary, several HIV-related national policies/legislations of South Africa[14-20] and the USA[21-22] strongly deject discrimination by entities and individuals against persons on several grounds including HIV status. These corroborate the ILO policy, which upholds human rights and fundamental freedoms and rejects discrimination on the grounds of real or perceived HIV status[23]. Interestingly, South Africa's legislation provides an avenue for discrimination based on inherent requirements of the job. This is an avenue that is likely to be exploited by the military because of its physical and medical fitness requirements, which are enshrined in pre-enlistment health assessment policies. The US legislation accentuates this position through its statement that mandatory medical examinations are permitted, if they are job-related and necessary for the job. These represent avenues that can be exploited to exclude HIV positive applicants. Remarkably, the US DOD policy makes provisions for candidates who do not make physical and medical fitness requirements to be considered for a waiver. This provides an opportunity for case by case examination of candidates.

Deployment

The current SANDF policy permits HIV positive service members to deploy. Physical fitness and ability to deploy are coded in the policy. Service members who are fit for all physical activities are classed G1 and G2, those who are fit to deploy anywhere at any time are classed K1 and green is used for those who are fit for all external duties, yellow for temporarily unfit for external duties and red for permanently unfit for external duties[2,10,24]. Clearly, SANDF was not excited about the 2008 court ruling as Army Surgeon General Lt Gen VJ Ramlakan reiterated that "*It's not as if the flood gates are open for sick people to be deployed, "The fittest soldiers will go where the task is most demanding….. "* [25]. However, HIV positive service members who are on ARVs and asymptomatic with cluster of differentiation 4 (CD4) count above 350cells/mm3 and an undetectable viral load are classed G2K1 (green) and are qualified to deploy. Again, and like the US DOD, deployment of HIV positive service members depends on the availability of care in the mission area.

The US DOD Instructions 6490.07, 6490.03, 6485.01 and 6025.19[12, 26 - 28] state that '*A diagnosis of human immunodeficiency (HIV) antibody positive with the presence of progressive clinical illness or immunological deficiency'* is unfit to deploy. Interestingly, even though the eligibility is clearly stipulated, all HIV positive service members are required to be cleared by a cognizant Combatant Command surgeon before deployment. This leaves the decision in the hands of one person and makes manipulation easier. Again, those who qualify are restricted to serve in non-combatant roles[5]. This indicates that HIV positivity limits ability to deploy and function in the service. Mendez[29] further notes that deployment decisions are made by each department and this has the potential to create disparities.

Again, the national policies and legislations strongly discourage discrimination on several grounds, including HIV status. However, the SA legislation, which has an avenue for discrimination based on specific requirement of the job, provides leeway for SANDF.

The argument that mission fields are hostile and without appropriate levels of medical care has been met fiercely by the position that virally suppressed HIV positive service members are fit to undertake several duties, including internal deployment, which can sometimes be more brutal. Again, peacekeeping missions deployments include a significant number of health facilities and personnel responsible for the maintenance of personnel's fitness and health, including HIV/AIDS units who make HIV services available and accessible, including post-exposure prophylaxis (PEP).[45]. Furthermore, even though there has been significant increase in the number of deaths of peacekeepers, this increase has been attributed to an increase in the number and scale, as well as nature and characteristics of recent peacekeeping missions.[43]. However, it is important to note that military personnel accounted for 71% of fatalities and illness contributed about 33% of all deaths in peacekeeping missions since 1948. [44] It is also important to note the risks that deployment of HIV positive personnel could pose to the mission, including their susceptibility to opportunistic infections which are prevalent in mission areas[46], risk of contagion of opportunistic infections to other personnel and civilians[47], and risk of HIV transmission through sex and accidents[48]. Finally, there is no evidence of the impact of HIV on peacekeeping missions and personnel, unlike other infectious diseases such as dengue and malaria.[45]

The UN Medical Support Manual for Peacekeeping Operations[30] can be described as unclear and gives more power to military institutions. The policy mandates countries to conduct pre-

deployment comprehensive health assessment (including HIV) according to the mandatory UN medical standards and classify service members as either fit or unfit. The policy does not indicate the level of fitness and therefore can be exploited against or in favour of HIV positive service members. Furthermore, the policy states that service members who deploy with pre-existing medical conditions will be repatriated at the country's cost. Again, compensation (US$70,000) of a deployed service member whose death, injury or illness is due to pre-existing medical conditions and not mission-related is paid by the contributing country. These potential costs seem to be a major factor in the decision to deploy HIV positive service members. Another unclear issue in the UN policy is the agreement for contributing countries to conduct mandatory HIV testing even though the same policy supports voluntary confidential HIV counseling and testing for service members. These confirm the assertions that the UN Security Council resolution 1308 on HIV/AIDS brought with it several policy challenges and has contributed to differences in approaches 5including the Namibian exclusionary policy which state that '*…provided its personnel an opportunity to attend VCT (voluntary counselling and testing)……..as an alternative to mandatory testing, whereupon, having received their HIV test results, personnel are permitted to apply for peacekeeping operations, with prior knowledge that only those with seronegative results would qualify'*9.

Importantly, free HIV treatment and care services are promoted and provided for all HIV positive service members37. The US DOD has, however, been accused of using DOD Instruction 1332.4538 to discharge or restrict the services of members living with HIV. This resulted in the court case between Nicholas Harrison, et al., Plaintiffs, v. James N. Mattis, et al., Defendants. This indicates

the need for the GAF, and other militaries developing new policies, to clearly specify conditions for the retention of HIV positive service members.

Conclusions

Maintaining a healthy and task-ready service through appropriate policies is essential in the face of the increasing threat posed by HIV and other infectious diseases. However, an evaluation of the policies generated key concerns. First, the contents of the military policies are not too diverse. Most military policies do not enlist or deploy HIV positive persons. However, some policies have considered the recruitment, enlistment and deployment of HIV positive service members after legal battles in their countries. Again, implementation of the military policies is inconsistent. Some militaries continue to exclude persons living with HIV despite the existence of policies that permit their inclusion. Secondly, discrepancies exist among the military policies, national legislations and international policies. The UN policy is not coherent and empowers the military to exclude HIV positives. Further, potential costs to be incurred, in the form of compensation and repatriation, seem to be a major factor in the decision to deploy HIV positive service members.

This evaluation recommends harmonization of military HIV policies to ensure uniform standards, especially for external deployment purposes. Finally, the coherence of the UN policy has become important since it influences the development of new policies as in the case of GAF as well as the interpretation and implementation of existing policies and decision making on the recruitment, enlistment and deployment of service members. Again, the policies present opportunities for militaries to increase uptake of voluntary testing services and adherence to treatment among its members. Finally, the upsurge of infectious and chronic diseases calls for the development of

policies to mitigate their impact on the military. Militaries developing new policies including the GAF can commence considerations of policies on chronic and infectious diseases in their policy development processes.

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