

Research Article

Health, Stigma, and Infectious Disease Management in the Mbarara Main Prison: A Qualitative Study of Staff and Incarcerated People

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Abstract

The current qualitative pilot study drew on 38 semi-structured interviews conducted in January 2025 with Uganda Prisons Service (UPS) staff (n = 16) and incarcerated men (n = 22). Interviews explored experiences of HIV, stigma, prevention, treatment adherence, and health system capacity. Data were analyzed separately for staff and prisoners using an inductive, semi-grounded thematic approach supported by NVivo, with multiple coders and integrated codebooks to enhance analytic rigor. Participants widely reported overt HIV-related stigma within the prison had diminished over time. Both staff and incarcerated individuals described a zero-tolerance approach to discrimination, routine access to HIV testing and antiretroviral therapy, peer support, and, in some cases, enhanced nutritional provision for people living with HIV. Education and “sensitization” were consistently identified as central to stigma reduction and treatment adherence, with strong support for peer-based counseling models. However, stigma persisted indirectly through associations between HIV and homosexuality, which remains criminalized and highly stigmatized. Despite severe structural constraints, Mbarara Main Prison has fostered an institutional culture that actively discourages HIV-related stigma.

Keywords

HIV/AIDs, Stigma, Infectious Disease, Prison, Staff, Incarcerated People, Uganda

1. Introduction

The Uganda Prisons Service (UPS), established in 1893, has undergone many transformations (see: Prisons Standing Orders, 2017), and currently operates under Article 215 of the Constitution of the Republic of Uganda (2005; as amended). UPS remains committed to humane, safe, and secure custody grounded in human rights - the UPS does not have a parole or probation service.

Operating, currently, 269 prisons across 19 regions, UPS

employs approximately 14,021 staff and houses 78,700 people as of January 2025. The prisoner population consists primarily of convicted individuals (51.8%) and remand prisoners (47.4%), with a small proportion detained for debt (0.8%). There efforts toward rehabilitation to support reintegration [1] which may in part explain the recidivism rate in 2025 of 13.4% [2]. However, UPS continues to face severe structural and systematic challenges, including chronic overcrowding, limited

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resources, infectious disease burdens, and food insecurity. These conditions are argued to be rooted in the enduring legacy of British colonialism, which embedded racialized violence and dehumanization into prison policies and practices [3-5]. Contemporary conditions could reflect this legacy, given the extreme overcrowding (occupancy rate 370.2%), potential corruption, and resultant persistent human rights violations [4]. Conditions are also exacerbated by resource constraints, further intensified by reductions in international support, which limit the implementation of the “Mandela Rules”, despite continued efforts by UPS staff to uphold international standards [6]. However, this is beyond the scope of the current study, although we recognize overcrowding continues to undermine access to health care, disease control, education, and basic living conditions, our current focus is on infectious disease and stigma in a UPS prison that houses men. Thus, we respond to an urgent need for evidence-informed approaches to healthcare within the UPS, to understand stigma and HIV while paying attention to incarcerated people and the staff at the Mbarara Main Prison, always conceptualizing health to include physical, mental, and social well-being [7].

1.1. UPS Staff Health and Occupational Stress

UPS is among the most overcrowded prison systems in sub-Saharan Africa, with staffing levels failing to keep pace with the rapid growth in the incarcerated population, resulting in workloads routinely exceeding recommended international standards [8, 9]. Officers are frequently required to work extended shifts, cover staff shortages, and perform multiple roles simultaneously, including custodial supervision, security, and administrative duties [2-4]. The staff experience occupational strains due to chronic understaffing, mandated overtime, and high turnover [2-4]. These conditions contribute to burnout, mental health challenges, physical exhaustion, and elevated HIV risk physical exhaustion [2-4, 10]. Compounding these occupational pressures is how many UPS staff reside in on-site prison barracks with their families, a long-standing institutional practice intended to ensure staff availability for security, which effectively blurs boundaries between work and personal life. Barracks housing is, for example among junior ranking officers, one room, three meters squared, thus lacking privacy, and with inadequate infrastructure. The conditions then may intensify stress, disrupt family life, and reduce opportunities for recovery from work-related demands.

Although health can be compromised for prison staff, access to formal mental health services remains limited and stigmatized within the hierarchical, paramilitary prison culture [11]. Physical health concerns, particularly tied to infectious disease like tuberculous (TB) and HIV/Aids, are also stressors for prison staff as the occupational and living conditions elevate vulnerability, both directly and indirectly [4, 7, 12]. Directly, barracks-based living has been linked in East African correctional contexts to dense social and sexual networks, limited access to confidential HIV services, and heightened

stigma, which may discourage regular testing and disclosure [13]. At least in part in consequence, national surveillance data indicate HIV prevalence among prison staff in Uganda has historically exceeded the rate among the general population or in Mbarara specifically, reflecting both occupational exposure and broader social determinants of health [8].

1.2. Prevalence of HIV/AIDS in Mbarara, Uganda

Uganda continues to experience an HIV/Aids epidemic, with national adult HIV prevalence estimated at approximately 5.1%, reflecting substantial progress since the peak of the epidemic yet still perpetuating ongoing public health challenges [13]. Recent reports estimate HIV prevalence in Mbarara City at approximately 8.1%, nearly 60% higher than the national estimate, while broader district-level estimates have ranged from 13% to over 14% among adults aged 15-49 [14, 15]. These elevated rates have been attributed to a combination of urbanization, mobility along major transport corridors, socioeconomic vulnerability, and persistent barriers to prevention, testing, and sustained engagement in care [11]. Collectively, these data underscore marked regional disparities in Uganda’s HIV epidemic and highlight Mbarara as a high-prevalence setting requiring targeted prevention and treatment interventions alongside broader national strategies.

Regarding the UPS prison service broadly, HIV prevalence among staff increases markedly over time, reaching approximately 15% overall and 20% among female staff, despite available testing and treatment services [4]. Current estimates of HIV prevalence at the Mbarara Prison Complex, consisting of the Mbarara Main Prison and Mbarara Women’s Prison, are not publicly reported, reflecting a broader gap in disaggregated epidemiological surveillance within Ugandan custodial settings. Nevertheless, available evidence suggested the HIV burden among incarcerated populations is likely to exceed that of the surrounding community, given the convergence of structural risk factors characteristic of prison environments, including extreme overcrowding, prolonged remand detention, constrained access to health services, and elevated background prevalence in the surrounding region [4, 11].

Within prisons, HIV vulnerability is further shaped by social and institutional dynamics, including limited privacy, constrained health infrastructure, and barriers to confidential testing and disclosure, which may undermine timely diagnosis and sustained engagement in care [11]. In the context of Mbarara, where regional HIV prevalence is already elevated, these institutional factors may compound existing risk and intensify transmission dynamics among both incarcerated individuals and staff. Moreover, prisons function as porous institutions, with frequent movement of staff, visitors, and remand prisoners, linking custodial health outcomes directly to community health systems. As such, HIV prevention and treatment within the Mbarara Prison Complex constitutes not only a correc-

tional health issue but a broader public health concern requiring integrated, rights-based responses aligned with national HIV strategies [11].

Despite the prevalence of HIV, stigma associated with HIV remains a barrier to treatment seeking in the broader Mbarara community, however, knowledge of how this stigma penetrates in Mbarara Main remains unknown empirically.

1.3. Stigma surrounding HIV/AIDS

Stigma, essentially, is a theory attributed to a known or unknown (i.e., a characteristic that cannot be seen but can discredit a person once discovered) attribute, a physical, social, etc. marker that suggests something about the person bearing the stigma is negatively or positively remarkable and always different [16]. Stigma is long studied in the context of HIV and Aids too [17-22]. The stigma associated with HIV/Aids has long been and remains a pervasive and enduring social phenomenon, despite significant biomedical advances in treatment and prevention, shaping health, well-being, and social experiences of people living with HIV [17-22]. Emerging early in the epidemic, HIV-related stigma was fueled by fear, misinformation, and moral judgment, particularly as HIV was initially associated with marginalized populations, such as gay and bisexual men, people who use drugs, sex workers, and racialized communities [21]. The association with homosexuality is particularly relevant in Uganda, where being gay is criminalized and can result in a prison sentence of 14 years, all legal processes upheld in recent “reforms” [23, 24].

More recently, antiretroviral therapy has transformed HIV into a manageable chronic condition and scientific evidence confirms individuals with sustained viral suppression cannot transmit the virus sexually [13]. Yet stigma remains remarkably resistant to reduction in society. At the individual level, HIV stigma operates through enacted stigma (experienced discrimination), anticipated stigma (fear of future prejudice), and internalized stigma (wherein people with HIV internalize negative societal beliefs about HIV) [25]. Scholarship suggests internalized stigma is particularly harmful, due to the strong association with depressive symptoms, anxiety disorders, social isolation, diminished self-worth, and poorer morbidity [26]. Further, stigma is consistently linked to people with HIV reducing treatment adherence and disengaging from care [26], perhaps to avoid the label. Interpersonally, stigma affects relationships with partners, family members, and social networks, often resulting in secrecy, rejection, or strained interactions driven by exaggerated or inaccurate fears of transmission [27].

At the societal level, like in workplace settings, HIV-related stigma can manifest as discrimination, job insecurity, or reluctance to seek accommodations or medical leave, particularly where confidentiality protections are weak [17-19]. Within healthcare systems, stigma may be expressed through judgmental provider attitudes, breaches of confidentiality, or dif-

ferential standards of care, contributing to mistrust and delayed or inconsistent engagement with services [28]. Structural stigma further entrenches these harms through laws, policies, and institutional practices criminalizing HIV non-disclosure, restricting employment or migration opportunities, or framing HIV as a moral failing rather than a public health issue [29]. The framing then legitimizes discrimination and exacerbates fear, discouraging HIV testing, disclosure, and early treatment initiation [20, 21]. HIV-related stigma is also deeply intersectional and relational, intersecting and relating with stigma attributed to sexuality, gender identity, race, poverty, substance use, and incarceration, geographic region, etc., thereby disproportionately affecting populations already subject to social and structural marginalization [30]. Stigma, collectively, reinforces inequities and sustains the false perception of HIV as only affecting certain “groups” rather than reflecting broader social determinants of health. The persistence of stigma has substantial public health consequences, undermining prevention efforts, perpetuating misinformation, and limiting the effectiveness of biomedical advances [18, 21].

1.4. Current Study

Given the prevalence of HIV/AIDs in Mbarara, in the current study, we turn our focus to the Mbarara Main Prison to study HIV/AIDs stigma within an extremely overcrowded institution housing men currently operating at approximately 370% capacity. To this end, we interviewed prisoners and staff to examine their experiences with HIV/AIDs and the associated stigma.

2. Methods

2.1 Data and Participants

Data for this report were drawn from 38 semi-structured interviews conducted in January 2025 as a pilot study, intended to shape the design of a larger, comprehensive investigation of health and well-being within the whole of UPS. Participants included UPS staff ($n = 16$) and incarcerated individuals ($n = 22$).

2.1.1. Incarcerated Participants

Twenty-two men were interviewed. Their ages ranged from 31 to 60 years, with four participants declining to disclose age. Eleven were married, four were previously married or uncertain of their marital status, and seven identified as single. Educational attainment ranged from grade three to post-secondary degrees. Time spent in custody ranged from one year and seven months to 18 years, with most participants reporting between five and nine years of incarceration. Among convicted participants, remand periods ranged from six months to over five years, and the longest sentence reported was 35 years.

Participants held diverse institutional roles, including counseling, trades (e.g., carpentry, tailoring, shoemaking), teaching, food services, court support, arts, sports programming, and vocational or educational training.

2.1.2. Staff Participants

Most staff participants were men; given the small number of women employed at the site, gender breakdowns are not reported to protect confidentiality. Ages ranged from 25 to 54 years, with one participant not providing demographic information. Eleven staff members were married, one reported living common-law prior to incarceration, and three were single. Educational attainment ranged from senior six to postgraduate degrees, with most holding a degree or professional diploma/certificate. Length of service ranged from just over one year to 25 years. Roles included management, custody and supervisory positions, health education, clinical care, gatekeeping, and correctional operations. At least five participants had experience working at other prisons in Uganda.

2.2. Recruitment and Data Collection

Participants were recruited in collaboration with UPS, with support from the wellness unit at the Mbarara Prison Complex, designated staff, and incarcerated individuals at Mbarara Main Prison. Interviews were conducted in person by a six-member research team (two Canadian researchers and four trained UPS employees); to protect confidentiality, UPS personnel did not have access to collected raw data. The UPS team members engaged with interviewees when asked to support translation. All interviewers were trained in qualitative interviewing and informed consent procedures. Interviews were audio-recorded, conducted in English with translation support as needed, and lasted 20-70 minutes. Staff interviewees received a small honorarium and incarcerated participants received a bar of soap; compensation was disclosed only after participation to avoid coercion. Verbal informed consent was audio-recorded, participants were assigned identification numbers, and no pseudonyms were used to minimize demographic inference. Participation was voluntary, with the option to skip questions or withdraw at any time. The only use of these options was by one participant who declined to disclose their HIV status. Interviews were transcribed verbatim using translation-capable software and verified against audio recordings for accuracy.

2.3. Data Analysis

Data was divided into two separate data sets, one of prisoners and one of staff. Each dataset underwent the same process using an inductive qualitative approach when coding and analyzing data.

To code, multiple researchers, to enhance analytic rigor and qualitative reliability, independently reviewed transcripts to identify emergent primary, secondary, and tertiary topics discussed, which became nodes. Each researcher then created a

codebook as they coded transcripts in their entirety. These codebooks were integrated, refined, and collapsed into a final codebook used to code all transcripts with QSR NVivo software. Separate final codebooks were developed for staff and incarcerated participants. All transcripts in each dataset were then analyzed using a semi-grounded approach in which themes emerged from the data however not theory (see axial and focused coding: [31, 32]). Themes were constituted when multiple participants reported similar phenomena or experiences, with efforts to look at how one phenomenon can be interpreted in different ways to produce different outcomes. Quoted material was edited for clarity and readability without altering meaning or vernacular.

2.4. Ethics

The study received approval from Memorial University of Newfoundland and Labrador's Research Ethics Board (Reference No. 20240710-MI). The research was conducted without external funding.

3. Results

3.1. HIV/AIDS, Stigma & Prevention

Most participants reported stigma toward HIV/AIDS within the prison had decreased over time. Prisoner Participant (PP) 33 said:

The time I have spent here in prison, I studied that at first, that stigma, that stigma attitude was there. But with the time, inmates and even staff, we are sensitized. Okay. And there is a change. So currently there are no groups that are stigmatized. They're not.

To reduce stigma, PP35 explained how "the doctors ... are teaching us," however PP37, who has a group of other prisoners he spends time with who are all also HIV positive, felt "it'll be better if inmate counselors get trained because they're always with their fellow inmates," to help reduce stigma. The lack of stigma was echoed widely, for instance PP34 noted discrimination is "not allowed" in prison, PP36 has "never discriminated," PP35 said any prisoners with HIV experience "no harassing," and PP37 described his experience:

Because of HIV, no, because me, I'm HIV positive but I have my other friends who are HIV positive. We go together to health facility. We get medicine and people who we all go together. Health staff. They give us medicine.... There's no discrimination.

PP46 and PP45 both felt HIV did not bring stigma, and PP47 said, instead of stigma, he witnessed people "caring for them. 'So, have you taken your drugs?' They're a bit kind with them." Further, PP57, explained how, even if there was a stigma, "In most cases, people who are sick, people don't care about their status. So, you live there how you feel like you want to live. There's nothing like stigmatization in that." PP70 even stated prisoners who are HIV positive are "actually

treated a little bit better quality, a little bit better because they are given extra cup of porridge with milk. They are actually given different type of vegetables, let's say fruits." Thus, he reported the antithesis of stigma occurred.

A few participants however felt an HIV stigma. PP48, for example, experienced stigma and harassment. He said:

Those ordinals, they like to bring the stigma on me. As I have told you that I'm HIV positive. They like to abuse me. 'You were born with HIV. You never know if your parents have died of HIV.' So that one can also bring the stigma to me. And other things, as you know, these bad people, they already abuse others.

And another, PP49 too said, HIV is "very very" stigmatized. Overall, the majority of prisoners described stigma as thought to be present but diminished overtime in prison because overt discrimination was not tolerated inside. Instead HIV-positive individuals have regular routine access to care and social support, including acts of kindness, peer reminders to take medication, and even enhanced nutritional support for HIV-positive prisoners (e.g., additional porridge, milk, or fruit).

Among Staff Participants (SP), many felt there was no stigma tied the HIV because staff "make sure we sensitize them [prisoners]," with many reporting HIV-related stigma within prison was actively addressed through sensitization and early testing at intake. Learning through testing if a prisoner being received is HIV positive aligns them with immediate treatment and healthcare, both available in prison. Staff too said there was no tolerance for stigma in prison, explaining the difference in stigma in the prison culture versus Ugandan cultures:

In this country, beautiful country of ours, Uganda, there is only one place where there is zero tolerance to stigmatization. That is prison. Our prisoners here who are HIV positive, they swallow the drugs in public. That is where we have reached. No one will hide in the toilet that I'm taking drugs. No [one] picks the drug, he swallows" (SP1).

SP25, echoed others, in suggesting there is "a certain percentage, just small. But they're not all stigmatized, actually. That's when integration comes in, like rehabilitating them. We won't accept stigmatization." Consistently describing a zero-tolerance approach to stigma within the prison, the actions the approach entailed included HIV-positive prisoners openly take medication without concealment, and formally sanctioning stigmatizing behaviour through internal disciplinary processes. SP1 explained they "don't entertain" stigmatizing behaviours and attitudes at all, describing the consequences of stigmatizing actions:

If we get any report that there is a prisoner who is stigmatizing the colleague, we take up that case and we take that prisoner through our court system ... we call him, we charge him, we call the adjudicating officer. They convict him for stigmatization. So we don't allow that and it's not there.

Likewise, SP72 reinforced how stigma:

Is minimized here because we try as much as we can to make sure they stay together, respective of their status. The

only thing we tell them not to share. You consider everyone positive apart from yourself. If you know your status. That is the only thing we tell them.

Moreover, staff emphasized how once a prisoner is identified as HIV positive, they are promptly counselled and initiated on treatment. The emphasis on integration and rehabilitation meant prisoners with HIV are encouraged to assume universal precaution practices rather than isolate individuals based on status (SP72). Like prisoners, some staff acknowledged isolated instances of stigma may occur, which they described as rare and swiftly addressed.

Education and Sensitization. Most prisoner interviewees desired more education and knowledge aimed at "sensitizing" prisoners about HIV transmission (PP34). P33 opined: "[UPS] should keep on sensitizing the inmates. Okay. About the transmissions and how they can avoid transmissions, the systems of transmissions." The participants valued the medical leadership and support UPS provides to help with sensitization too: "The support. We were given counselors and they tried to guide to guide us, and you find yourself getting at a better space" (PP36). In this regard, participants requested more training for prisoners who are counselors regarding HIV and transmission because of the strong relationships between prisoners. PP37 explained thinking "it'll be better if inmate counselors get trained because they're always with their fellow inmates." PP61 reiterated:

I think the prison service should at least employ well trained counselors so that they can give enough counseling to their HIV patience. And they also employ peer educators so that they can teach the fellow inmates on how to stay with people who have HIV. Also, they can make they have to make sure that all the services which are support delivered to the HIV clients should be adequate. So, it should not be inadequate.

A few participants advocated for "immunization of immunizable diseases" (PP37) to reduce spread of other infectious that could further compromise an HIV positive prisoner.

Staff participants too consistently emphasized the need for expanded education on HIV transmission, prevention, and risk reduction. Many attributed ongoing vulnerability to limited sensitization, particularly among individuals with lower levels of formal education. As SP31 explained, "Some people are not sensitized enough about the results of HIV and AIDS." Several participants suggested education increases protective behaviors, including testing. For example, SP1 noted that those with more schooling were more likely to carry testing kits and engage in cautious practices, they felt "for those are not educated enough [are more at risk]." They continued to describe how "at least for us who have gone go to school for some time, we move with a testing kit, the testing kits in the pocket in the bag" (SP1). Thus, as per SP64: "prison itself should get sensitized. Sensitizing people around how HIV is spread and how it can be controlled," which SP65 felt is a problem more prevalent among "youth... who have not gone to school, you cannot really know what needs to be done."

Literacy was identified as a structural barrier to effective

education. Participants described how reliance on verbal instruction and memorization—rather than written materials—can limit retention and understanding of prevention strategies. As SP1 explained, illiteracy constrains the ability to reinforce knowledge and sustain behavioural change (i.e., “the biggest, the largest population is literate. You find they cannot manage to boost SE for testing” (SP1)).

SP11, like many UPS staff, believed to make prison safer, the prisoners and staff required more education about how to “protect yourself,” given the benefits of “talking to them, advising them, and counselling them. Telling them about it. Or even like how you can protect yourself.” Staff also felt they like prisoners needed more education on how to protect oneself from infection. SP25 argued “staff [must be sensitized] about the dangers and outcomes of HIV/AIDs”. SP15 too felt a need for more “sensitization about HIV, the dangers and what have you” and SP16 felt education is “lax in that area [HIV].” Here, SP18 provided suggestions for how UPS can promote awareness through “sensitization gatherings [with] these prisoners and the prison staff. then there was information giving, peer education, and one-to-one or group discussions.” SP16 echoed: “sensitization gatherings that mainly focus on preventive measures, so that people are aware about the transmission cycle or transmission models.” Thus, some staff advocated for regular sensitization activities targeting both prisoners and staff, including group sessions, peer education, and one-to-one counselling, always with a focus on transmission pathways and prevention.

Others emphasized the value of challenging persistent misconceptions about HIV:

Some people don't even believe, some people think that AIDS is a project. Some who think that AIDS is for rich people. So, when they are sensitized, they can get outta that darkness. And know that the disease is for everybody. And it has no borders (SP29).

These beliefs, like HIV is “a project” or limited to specific populations, require countering through education intended to help people understand that HIV “has no borders” (SP29). In addition to education, staff highlighted the importance of accessible services—such as nearby testing and treatment—to support viral suppression (SP27).

Sexuality. All participants consistently distinguished HIV-related stigma from stigma associated with homosexuality, which they described as more pervasive. Several prisoner interviewees explained HIV infection was often assumed to result from same-sex activity, leading to discrimination based on perceived sexual orientation rather than health status. PP36 explained how “the way we come in when we're not affected and he acquired the disease in the prison and he, at a certain point, it affects him,” the belief here being the infectious was transmitted through gay sex. PP47 further explained: “times now, if you have there is a way you stigmatize people depending on how they conduct themselves. Now if you cannot associate with somebody who is a homosexual. Indeed, if you found a homosexual, people will begin discriminating you.”

The stigma of sexuality then is also tied to how being gay is a criminal status.

Also, among staff interviewees, as P02 explained, screening helped determine whether infection occurred prior to incarceration, which is a differentiating factor for stigma because homosexuality is illegal and highly stigmatized in Uganda. If HIV was acquired in prison, there could be suspicion of gay sex and the stigma tied to sexuality would prevail. Thus, individuals who acquire HIV in prison may be accused of same-sex activity, linking HIV stigma to broader moral and legal judgments about sexuality. Several staff participants identified homosexuality as the primary route through which HIV is believed to spread in prison, reinforcing stigma toward perceived sexual orientation. For instance, accusations of “sodomizing and all that” (SP02) are clearly stigmatizing, revealing the extent of the intersection being “homosexuality” (SP18) and being HIV positive. To exemplify, asked “Can you tell me how diseases are transmitted most commonly in prison?” SP26 replied: “In prison? It is now, like now this homosexuality by that one.” While SP31 explained: “Homosexuals. Homosexuals. That act comes with a lot of negativities because now you get an infected person as you go together, [and] the end result is you get infected.” Thus, being gay is considered by many at the root of infection and is negatively interpreted. Either way, as soon as UPS staff determine a prisoner is HIV positive, they ensure the prisoner is “always counselled and start the medication” despite their sexuality (SP02).

3.2. Treatment Adherence and Psychosocial Stress

One possible outcome of more education was thought to be greater adherence to treatment plans for HIV positive prisoners: “To improve you [must] will follow the doctors, which are teaching us to take the medicine” (PP35). These prisoner interviewees suggested a need for greater monitoring of anti-viral drug compliance to help reduce the possibility of transmission. PP57 said:

In regard to HIV/AIDS, prisoners should be inspected carefully when they are taking their drugs in most anti-viral drugs, the HIVs, the HIV drugs, in most so that they can just live for those people who came HIV positive... they should observe, and make sure that there are no more HIV contractions within the prison.

Taking required medications to reduce viral loads (i.e., “the [UPS] try by all means to collect all medicines to protect the prisoners” (PP35) could ease transmission, as would creating additional healthcare wards or spaces (i.e., “they should provide enough health facilities for the prisoners so that we are safe” (PP36) or “if the prisons can construct a building for people who are infected or who are suspect so that one can do better” (PP37)). Further, some prisoners emphasized the need of nutritional support and vitamins to strengthen immune functioning among HIV-positive prisoners, which were thought to result in healthier prisoners and lower viral loads

(see PP47).

Prisoner participants also highlighted the psychological burden of living with HIV in prison. As PP71 explained, “With the virus in my blood... it brings stress.” These accounts underscore the intersection of physical health, mental well-being, and structural conditions in shaping treatment adherence and stresses associated with HIV within Mbarara Main Prison.

3.3. Inadequate Medical Supplies

Despite strong institutional commitment to HIV care, staff reported the burden of persistent shortages of medical supplies, including testing kits, medications, gloves, and diagnostic tools. For instance, SP25 described how there is a need: “First of all, ensuring there is enough medication for the inmates and the staffs who are not okay. And maybe even making sure that there is continuous supply of medical supplies.” Like SP25, several participants described inconsistent access to pharmaceuticals and delays in treatment due to supply constraints. As SP20 noted, “the supply is always not enough,” even for common conditions. Others highlighted occupational risks associated with inadequate protective equipment and limited testing capacity for bloodborne and infectious diseases (SP72). Participants expressed concern these shortages have been exacerbated by recent reductions in international aid, further constraining the prison’s ability to prevent, detect, and manage infectious disease. For example, the cut to USAID and other healthcare supply sources under the Trump Administration [33, 34].

4. Discussion

In the current study, we provide an in-depth examination of HIV stigma and counter activities to stigma, including through infectious disease management and education, at the Mbarara Main Prison. Situated within a prison system shaped by colonial legacies, chronic overcrowding, and structural resource constraints, the findings reveal both persistent challenges and areas of successful interventions at the facility. Despite operating at more than 370% capacity and facing significant shortages in medical supplies, staffing, and infrastructure, participants described meaningful efforts to reduce HIV-related stigma, expand sensitization, and promote access to care.

Contrary to the literature, and what is known in free society, both staff and incarcerated individuals emphasized that overt discrimination based on HIV status is increasingly unacceptable within prison culture and is disciplined. Instead, stigma is not tolerated and is discouraged through education, peer support, and institutional enforcement of the zero-tolerance policies. This finding occurs despite the pervasive and enduring reality of stigma in free society that continues even with advances in viral suppression [13]. Our participants did not describe an internalization of stigma and related impacts on self-worth [26]. Instead, even the few prisoners who experienced harassment did not anticipate future harassment as the acts

were few and far between, thus they had aware of potential interpersonal stigma [27], but HIV positive prisoners were also a community in themselves and accepted into the broader community of Mbarara Main Prison too. Among staff, no one who was HIV positive mentioned societal level stigma [28] around their status, such as feeling implications for their job security or confidentiality concerns. However, staff and prisoners alike recognized the reduced HIV stigma was common to UPS, not Ugandan society and would feel stigma beyond the prison campus.

Instead of HIV status, stigma was more often linked to sexuality—particularly homosexuality. This is at least in part a consequence of the illegal nature of homosexuality, which essentially requires acceptance of sexuality as biological (not social), changes in legislation, policies, and belief systems to reduce the stigma. However, how to manage the health vulnerability of gay prisoners requires intervention. The challenge, however, is for instance, how an introduction of condoms into prisons is unlikely, as the service is restricted in ability to provide contraceptive when sex should not be happening. Further, concerns are likely if condoms were to be provided that the act would look like a government organization endorsing an illegal act. Thus, the more feasible option is treatment compliance to reduce viral loads and education about healthy sexual relationships practices once viral loads are reduced by the former.

Participants, the staff and prisoners alike, desired more knowledge, awareness, and education as well as related supports for HIV/Aids. They spoke of the central role of education in reducing HIV transmission. Further, they suggested using and developing peer-based strategies for reducing HIV transmission risk and supporting treatment adherence because of the trust prisoners have among each other. Thus, there was strong support for peer-based approaches, including expanded training for prisoner counselors and peer educators. These individuals were viewed as uniquely positioned to provide ongoing support, reduce stigma, and encourage safer behaviours. Further, all staff and prisoner participants consistently identified sensitization, counselling, and trusted peer educators as effective mechanisms for improving knowledge, challenging misinformation, and encouraging engagement with care as well as compliance. Many called for sustained awareness campaigns, improved access to accurate information, and reinforcement of treatment adherence. Education was seen as central to medication adherence and viral suppression, as well as for reducing fear and misinformation. Several participants also emphasized the need for adequate health infrastructure, including dedicated clinical spaces and isolation facilities for infectious diseases such as tuberculosis that can further compromise the health of an HIV positive individual.

At the same time, the psychological burden of living with HIV in prison is real and only exacerbated by overcrowding, occupational strain, and prolonged confinement. The burden highlights the inseparability of physical, mental, and social health in custodial environments. Staff accounts revealed sig-

nificant occupational stress, elevated HIV risk, and moral responsibility to provide care in the face of inadequate resources. Persistent shortages of testing kits, medications, and protective equipment—compounded by recent reductions in international aid—pose serious threats to disease prevention and staff safety, limiting the extent to which international standards such as the Mandela Rules can be fully realized [6].

By employing a collaborative, contextually grounded research approach, this pilot study addresses a critical gap in the empirical literature on prison health in Mbarara Main Prison. The findings underscore the urgent need for evidence-informed, adequately resourced, and rights-based health interventions that support not only incarcerated people, but also staff and their families living within prison compounds. Strengthening prison health systems in Uganda requires sustained investment in education, peer-led programming, mental health supports, and reliable medical supply chains. Without addressing the structural conditions that shape vulnerability—overcrowding, prolonged remand, and resource scarcity—efforts to control infectious disease and promote well-being will remain constrained. Our study offers a foundation for future research and policy action aimed at advancing humane custody, public health, and rehabilitation within the UPS.

5. Conclusion

Overall, the convergence of chronic understaffing, excessive workload, constrained living conditions, and limited psychosocial supports places UPS staff at elevated risk for burn-out, mental health challenges, physical exhaustion, and thus vulnerability to infectious disease. This collectively underscores the need for structural reforms, workforce expansion, confidential health services, and targeted infectious disease prevention and mental health interventions within the UPS. One method to start addressing these needs is to understand the implications of HIV-related stigma, which is reduced in prison - something society can learn from. However, the stigma is very much strong and dominant around sexuality and the intersection of HIV/Aids and homosexuality. The latter requires multi-level, rights-based approaches that extend beyond individual education to include legal reform, healthcare system transformation, and community-led interventions [6, 11]. Evidence indicates peer support, the meaningful involvement of people living with HIV in program design, sensitization, educational initiatives can reduce stigma and improve health outcomes [13, 28]. Ultimately, progress toward ending the HIV epidemic is inseparable from dismantling stigma in all its presentations and complexities. Stigma continues to harm individuals, reinforce social inequities, and obstruct effective and equitable public health responses.

Abbreviations

HIV Human Immunodeficiency Virus

AIDSS Acquired Immunodeficiency Syndrome
UPS Uganda Prison Service

Conflicts of Interest

The authors disclose no conflict of interests.

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