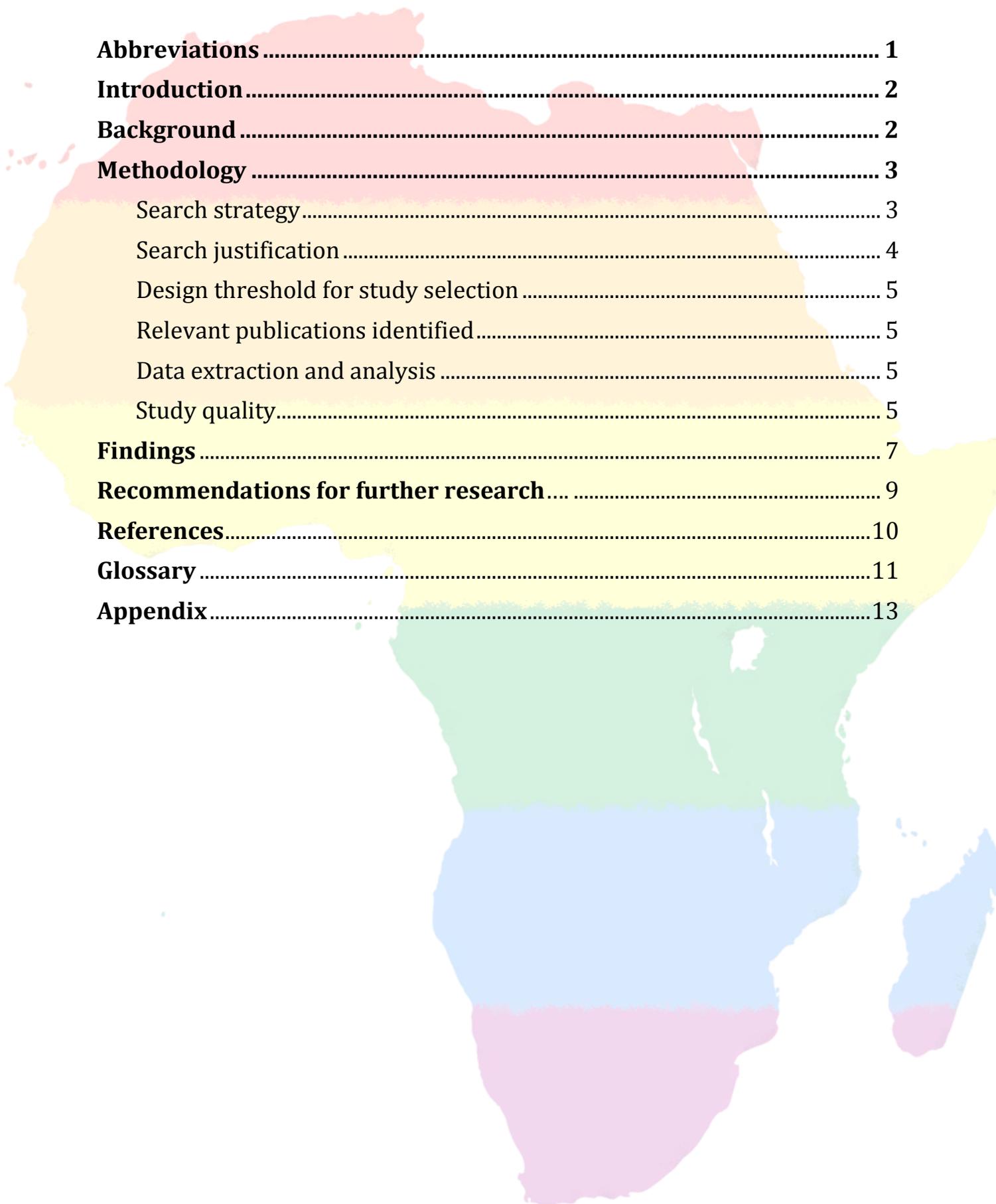




The challenges to antiretroviral adherence
among MSM and LGBTI living with HIV
In east and southern Africa

A systematic literature review

TABLE OF CONTENTS



Abbreviations	1
Introduction	2
Background	2
Methodology	3
Search strategy	3
Search justification	4
Design threshold for study selection	5
Relevant publications identified	5
Data extraction and analysis	5
Study quality	5
Findings	7
Recommendations for further research	9
References	10
Glossary	11
Appendix	13

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
amfAR	American Foundation for AIDS Research
ART	Antiretroviral therapy
ARV	Antiretroviral drugs
ESA	East and southern Africa
HCT	HIV counselling and testing
HIV	Human immunodeficiency virus
LGBTI	Lesbian, gay, bisexual, transgender, and intersex
MSM	Men who have sex with men
MSW	Male sex workers
PLHIV	People living with HIV
UN	United Nations
UNAIDS	The Joint United Nations Program on HIV/AIDS
VCT	Voluntary counselling and testing
WHO	World Health Organisation

Introduction

The past decade has seen dramatic improvement in efficacy and reduction in side-effects of antiretroviral drugs (ARVs). It is now possible for treatment to reduce viral load to the point where an infected person is no longer or much less infectious to others. As a result, 'treatment as prevention' has become the cornerstone of UNAIDS's post-2015 global strategy to end AIDS by 2030. As the expansion of treatment provision continues, the emerging large-scale challenge is how to ensure patient adherence to complex HIV treatments. Viral suppression requires >95% antiretroviral therapy (ART) adherence, but resource-poor countries average just 23%, and some much lower.

The east and southern African (ESA) region bears the greatest burden of the global HIV and AIDS epidemic, including the largest number of people on ART. While there is some research on the challenges of adherence in the general population of PLHIV in ESA, there is very little research on adherence among key populations. This is problematic because key populations, including men who have sex with men (MSM) and lesbian, gay, bisexual, transsexual, intersex (LGBTI) communities, experience up to 19 times greater HIV prevalence globally (UNAIDS 2014: 20). Key populations also suffer human rights infringements that restrict their access to, and engagement with, HIV services.

In response, HEARD has conducted a systematic review of the literature on ART adherence of MSM PLHIV and LGBTI PLHIV in east and southern Africa, primarily to identify key knowledge gaps and guide further research. Only two studies met the above search parameters: (1) a qualitative global study which included views of one transgender person in South Africa on their HIV service needs; and (2) a clinical study of ART adherence outcomes of young men and women reporting high-risk behaviour, and MSM, in coastal Kenya. Neither study was sufficiently rigorous or representative to provide meaningful data or analysis. Consequently, the knowledge gap is all encompassing and suggests open and exploratory research to understand the linkages between criminalisation, discrimination, and (double) stigma experienced by (HIV positive) MSM and LGBTI communities, and their challenges to ART adherence.

Background

The ESA region bears the greatest burden of the global HIV and AIDS epidemic. With only 5% of the world's population, ESA is home to half the world's population living with HIV. Today the region continues to be the epicentre of the HIV and AIDS epidemic, experiencing 48% of the world's new HIV infections among adults, 55% among children, and 48% of AIDS-related deaths (UNAIDS 2013). From this crisis, countries in the region have emerged as some of the world's leading nations in HIV testing, up-scaling ART coverage, and increasing condom usage. The past five years or so have seen the rise of the 'HIV treatment as prevention'¹ approach, whereby treatment reduces viral load to the point where an infected person is much less infectious to others. Treatment as prevention is a core component of the post-2015 UNAIDS global Fast-Track strategy to end AIDS as a public health concern by 2030. The strategy aims by 2020 to have 90% of all people living with HIV to know their HIV status; 90% of all people with diagnosed HIV infection receiving sustained ART, and; 90% of all people receiving ART to have viral suppression. These targets rise to 95% by 2030.

¹ Antiretroviral therapy reduces the risk of HIV transmission by up to 96% (UNAIDS (2014) *Access To Antiretroviral Therapy In Africa*)

As access to ART scale-up continues to be at the forefront of programme efforts to prevent new infections and HIV progression, socio-behavioural factors that may affect the adherence of ART become increasingly salient (Cock 2009: 488). For viral suppression, evidence shows optimal adherence to ART is >95%² with studies suggesting that inadequate adherence in resource-poor countries averages 23%, varying considerably by context (Paterson, Swindells, Mohr et al 2000; Scanlon and Vreeman 2013: 4). This has led to an exploration in research of the challenges to adherence for PLHIV on ART in the general population within ESA, but, as yet, there has been extremely limited focus on key populations like MSM and LGBTI: '[r]esearch to improve access and adherence among these [key] populations is virtually non-existent in LMIC' (Scanlon and Vreeman 2013: 7). The exclusive general population approach to researching and promoting ART adherence repeats similar knowledge gaps of earlier HIV prevention research (UNAIDS 2010: 3; Beyrer, Wirtz, and Walker et al 2011: 8).

A paucity of research on key populations is problematic because MSM, LGBTI communities, and key populations more generally experience comparatively higher rates of HIV prevalence – up to 19 times greater globally in MSM than for the general population (UNAIDS 2014: 20). Key populations also typically suffer human rights infringements that undermine their access to, and engagement with, HIV prevention and treatment information and services. Methodologically, however, it can be comparatively challenging to research populations that are criminalised, discriminated against and stigmatised in society due to the safety considerations for study participants, the hidden nature of these populations, and a lack of dedicated funding (Beyrer, Wirtz, and Walker et al 2011: xxi). These attributes that hinder research on key populations also form the impetus for a focus in understanding and addressing challenges these populations may be facing in ART adherence given their vulnerability.

A rigorously-researched evidence base to advocate and inform from is a prerequisite for more sensitised programmes and interventions. Continuing to orientate HIV research at the general population level will result in a lower return on investment in health outcomes (WHO 2014: 7-8). Furthermore, the human right to the highest attainable standard of health will continue to be beyond the reach of key populations, such as MSM and LGBTI that form the focus of this paper. The need for research on ART adherence was also confirmed by MSM and LGBTI community activists who attended an amfAR-organised one and a half day meeting to develop an LGBTI research agenda, in partnership with the Gay and Lesbian Coalition of Kenya and the International AIDS Vaccine Initiative (amfAR 2014).

Methodology

A systematic search of the literature was performed in August 2015.

Search strategy

The search was conducted in the databases of African Journals Online, Web of Science, MEDLINE via PubMed (includes The Lancet *Global Health*), ScienceDirect, WHO IRIS, UNAIDS Corporate UNAIDS Publications, and Google. The database of Google was included to accommodate relevant grey literature on the topic of the review which falls outside type of publications

² Although >95% adherence is still cited for optimal adherence, more recently research has emerged suggesting lower adherence is required for effective viral suppression using more potent boosted protease inhibitors and nonnucleoside reverse transcriptase inhibitors. Until there is a consensus on optimal adherence to achieve viral suppression and avoid developing resistance, caution is exercised by using the >95% figure for optimal adherence (Kobin, and Sheth 2011: 373; Mitiku, Abdosh, and Teklemariam 2013)

included in the databases listed above. The databases have nuanced query forms and abilities which made applying identical parameters impractical and often technically impossible. A database-by-database breakdown is provided as an appendix to this paper, and combinations of the following terms were used that best suited the nuances of respective databases:

Title/abstract: *'HIV treatment', 'Antiretroviral', 'Adherence'* (What)

AND

Title/abstract: *'Men who have sex with men' OR 'gay' OR 'LGBTI'* (Who)

AND

Title/abstract: *'Africa'³ OR 'Uganda' OR 'Kenya'* (Where)

AND

Timeframe: *'2010-2015'* (When)

Search justification

This review is focused on research studies examining challenges to adherence experienced by PLHIV in the MSM and LGBTI communities in east and southern Africa (ESA). No other systematic literature review was found to have the same thematic, population, timeframe and geographical focus.

Previous literature reviews have comprehensively covered challenges to ART adherence in general populations within ESA (Nakiyemba, Aurugai, and Thomas 2006; Scanlon and Vreeman 2013). Although similar in geographical focus to this review, findings based on general population studies cannot be used in relation to the very different situation MSM and LGBTI often find themselves in – 'Adult same-sex behavior is criminalized and socially unacceptable in many African countries... Stigma, discrimination, and social isolation may seriously undermine the ability of criminalized groups such as MSM to engage in and adhere to care' (Smith, Tapsoba, and Peshu 2009). For this reason, unless studies specifically examined MSM and LGBTI communities, they were not considered for inclusion in this review.

Literature reviews with a key population focus, including MSM, on challenges to adherence were very limited and all with a geographical scope outside of ESA; in particular, reviews were dominated by the United States context. Where arising, these studies were not considered for inclusion as 'a key difference in sociocultural milieu and policy between many resource-limited and resource-rich settings is service delivery to MSM' (Smith, Tapsoba, and Peshu 2009). It would not be possible to apply the findings of these studies, without considerable caveat and adjustment, to the ESA contexts and for that reason the methodology of the review is structured to exclude these studies.

'Men who have sex with men', 'gay' and 'LGBTI' formed the population component of the search to filter out other key populations, vulnerable populations, and general population studies. Uganda, Kenya, and South Africa are provisionally designated as the focus countries for any subsequent field research so were specifically searched for in this literature review. 'Africa*' was used instead of 'South Africa', as it would additionally match other geographical areas including: Sub-Saharan Africa, Southern Africa, East Africa, and Africa. This geographical filter would reduce false positives from the search results by eliminating the larger body of research

³ The * represents alternative endings, for example, Africa, Africa's, African, Africans, African's, Africans'

examining similar issues in industrialised countries. Papers were excluded if dated before 2010 due to advances in ART changing the nature of challenges to adherence, and the review's focus on current issues. We considered full journal articles, book chapters, working/background papers, reports and grey literature available in the English language.

Design threshold for study selection

The threshold for thematic relevance is explained and discussed above in the 'Search strategy' and 'Search justification' respectively. Consideration of the type and amount of research available led to inclusion of studies of any methodological design, meeting the thematic threshold. Instead, limitations or weaknesses in design were accounted for in 'Study quality' below.

Relevant publications identified

The thematic selection of papers was done on the basis of titles, then abstracts and finally by scanning the documents. Of the 511 cumulative results, all but two were excluded on the basis of the selection criteria owing to date, geographical focus, subject, or depth (some papers mentioned adherence issues for MSM but did not explore that or cite relevant studies). The two studies to be reviewed are:

1. Schneiders M. (2014) *Values and preferences of transgender people: a qualitative study to inform the Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations development process*, Geneva: World Health Organisation
2. Graham S., Mugo P., Gichuru E., Thiong'o A., Macharia M., Okuku H., Elst E., Price M., Muraguri N., and Sanders E. (2013) 'Adherence to Antiretroviral Therapy and Clinical Outcomes Among Young Adults Reporting High-Risk Sexual Behaviour, Including Men Who Have Sex with Men, in Coastal Kenya' *AIDS and Behavior* 17:1263

Data extraction and analysis

As only two papers, which were dissimilar in study design, focus, and type of results, qualified for inclusion, there was not the need to tabulate key attributes and a summary of findings of each for comparative or clustering purposes. Instead, after screening the full text of each paper limitations in study design were listed for each, a discussion of which can be found in 'Study quality' below. Secondly, the findings of each study were recorded filtered only with respect to their relevance to the question of this paper. This paper restricts itself to summarizing the findings narratively. A full discussion of these findings can be read under 'Findings' below.

Study quality

1. Mira Schneiders (2014) *Values and preferences of transgender people: a qualitative study*, Geneva: World Health Organisation

The World Health Organisation 2014 *Values and preferences of transgender people: a qualitative study* aims to 'inform the consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations development process' (Schneiders 2014: 9). This research has a global-level focus but has been included as it considers views of a transgender voice on ART adherence in South Africa and therefore meets the criteria in an area with very little other primary

research. Inferences from this study are cautious as the qualitative interview sample size is just fourteen transgender persons, only one of whom is from ESA. Furthermore, all but one interviewee worked with transgender or health-related organizations, casting further doubt on how representational the sample can be of transgender people more widely (p14). On a final note regarding the sample cohort, out of the 14 in depth interviews, 'Eight respondents reported being HIV negative, while three did not know their HIV status' reducing the study's ability to triangulate lived experiences of ART adherence (p14). The paper briefly mentions an initial desk scoping-review, but this is not explored sufficiently within the paper to be of value to this literature review (p11). The substance of the paper is augmented by a final contingent of 18 'key regional experts in transgender health and HIV' through the Delphi consultation method⁴, using two rounds of online surveys (p12).

2. Graham S., Mugo P., Gichuru E., Thiong'o A., Macharia M., Okuku H., Elst E., Price M., Muraguri N., and Sanders E. (2013) 'Adherence to Antiretroviral Therapy and Clinical Outcomes Among Young Adults Reporting High-Risk Sexual Behaviour, Including Men Who Have Sex with Men, in Coastal Kenya' *AIDS and Behavior* 17:1263

The study investigated antiretroviral therapy (ART) adherence in the coastal region of Kenya in 2013 among high risk adults, including MSM, participating in a clinic-based cohort (among 250 HIV-1-seropositive adults, including 108 MSM, 15 heterosexual men, and 127 women) (Graham, Mugo, and Gichuru et al 2013: 1255). Survival analysis was used to compare attrition across patient groups. Differences in adherence, weight gain, and CD4 counts after ART initiation were assessed. This is a pilot study that acknowledges a number of limitations including a small sample size from one geographic location; a very small control group of 15 high-risk heterosexual males; losses to follow up; limited follow-up window, and; an inconclusive discussion around some of the results.

Particularly problematic here is the small heterosexual male control group because it reduces the extent to which gender instead of sexuality can be controlled for, undermining the extent to which a comparison can be made between the much larger female sample group and MSM. Furthermore, in order to isolate circumstances exclusive to MSM, high risk practices more generally⁵ was controlled for by only accepting high-risk heterosexual male and high risk female participants for inclusion in this study. Although the value of this is clear, as a consequence, the possibility is eliminated to extrapolate the differentials in adherence and clinical outcomes beyond high risk groups – there is no comparison between MSM and the general population. A final factor the study recognises that makes its results problematic to extrapolate from is that the 'research programme [is] specifically oriented towards engaging MSM in care, with counsellors trained in male sexual health' whereas '...the vast majority of ART programs in Africa do not specifically identify MSM among their male patients nor provide services targeted to these men's needs...' (Graham, Mugo, and Gichuru et al 2013: 1263).

⁴ The method entails a group of experts who anonymously reply to questionnaires and subsequently receive feedback in the form of a statistical representation of the "group response," after which the process repeats itself. The goal is to reduce the range of responses and arrive at something closer to expert consensus.

⁵ Such as transactional sex work, multiple sexual partners, anal sex, or a recent sexually transmitted infection

Findings

In consideration of the small number of studies and the distinct areas of focus for each, findings are presented by study rather than by theme.

1. Mira Schneiders (2014) *Values and preferences of transgender people: a qualitative study*, Geneva: World Health Organisation

The World Health Organisation's *Values and preferences of transgender people: a qualitative study* spans transgender health topics ranging from HIV Testing and Counselling (HTC) to Hormone treatment and gender-affirming surgery. The topic of focus for this literature review will be topic four: Antiretroviral therapy. This topic does not draw a clear division between challenges to access and challenges to adherence. Three challenges are discussed in the paper that this literature review considers applicable to adherence. These are:

- Discrimination by healthcare workers, including refusal of service,
- Dearth of knowledge and guidance by the healthcare profession for people on hormone therapy
- Concern, and experience, of negative ARV interaction with hormone therapy

One of the most potent forms of discrimination by health workers is refusal of treatment on the basis of perceived transgender identity, an instance of which was documented in the paper - 'One HIV positive transgender woman described an instance of discrimination from her doctor, where she had been refused treatment' (Schneiders 2014: 28). The paper does not go beyond this personal account to estimate how prevalent refusal of treatment may be for transgender persons and highlights a knowledge gap as no other literature was found to address this question. Discrimination and stigma by healthcare workers was also perceived in forms that did not result in a refusal of treatment although what forms that may be was not elaborated upon. The South African transgender person interviewed for this study is quoted as saying 'There are issues of discrimination and issues of prejudice... because if you are transgender, you often get denied this treatment' albeit in connection with Post-Exposure Prophylaxis (PEP) (Schneiders 2014: 27). Discrimination in all its forms towards transgender persons creates negative interactions with health care workers and, as this paper highlights, that creates a challenge to access which is a direct barrier to attending medical appointments and disclosure required for ART adherence.

'Many transgender individuals perceived the lack of guidance from the health-care profession on ART for individuals on hormones as a major challenge'. As the South African transwoman shares: 'I think when we talk about HIV, it should take into account what are the medications that we are on; what are the possible risks, what are the possible interactions when somebody goes onto ARV treatment as a trans person. The medical practitioners should be able to sit down with them and tell them: Seeing as you are on hormones, and now you are going onto ARVs, these are the risks, these are the considerations. That should be discussed. Definitely it's about a comprehensive package of health.' (Schneiders 2014: 28-9)

A lack of knowledge, and therefore medical guidance, by the healthcare profession for people on hormone therapy may form a more insidious, and the paper suggests, common, form of discrimination. The paper advises that if health care workers had the training to address patients' questions about drug interaction and side effects relating to gender expression, ART

uptake and adherence may improve. If there is a systematic lack of training and guidance regarding this key population and this is demonstrated as negatively affecting access to health care, it could form a removable barrier to the human right for the highest attainable standard of health, and therefore warrants exploratory research to build upon the findings within the paper.

The paper reported 'widespread' concerns about drug interaction between ART and hormone treatment, as well as the impact of perceived and experienced ART side effects on gender expression as obstacles to ART commencement and adherence. The paper unfortunately does not reference research or an expert's opinion on how widespread these concerns are. Where perceptions exist that ART interferes with gender expression, transgender people will consider their competing priorities which may result in avoiding, delaying, reducing, or halting adherence to ART: 'One individual explicitly questioned whether he would be willing to go on ART, given his uncertainties around possible interactions'. The lack of accessible and tailored information is touched on elsewhere in the paper, and is partly attributed to a conflation of transgender issues with gay and bisexual issues: 'The sad thing is that transwomen are lumped within those MSM approaches, within those MSM statistics, within those MSM interventions. Transwomen are not MSM. Once you start focusing on MSM and you include transwomen, you have already missed us' (South African transwoman) (Schneiders 2014: 17). It therefore appears that further research is required to explore the need for information that is accessible and tailored to transgender people, and the means to achieve this. The paper lists this as a supporting factor in encouraging transgender people in seeking treatment.

2. Graham S., Mugo P., Gichuru E., Thiong'o A., Macharia M., Okuku H., Elst E., Price M., Muraguri N., and Sanders E. (2013) 'Adherence to Antiretroviral Therapy and Clinical Outcomes Among Young Adults Reporting High-Risk Sexual Behaviour, Including Men Who Have Sex with Men, in Coastal Kenya' *AIDS and Behavior* 17:1263

As mentioned, MSM as a population group appears to dominate the emerging body of research around access to healthcare by MSM and LGBTI - yet the literature review found just one study focusing on MSM's adherence to ART in ESA. That study affirms the position that there is a dearth of published research even on the experience of MSM '...men who have sex with men have only recently become a focus for HIV programs in this region...little is known about antiretroviral adherence among this group' and '[t]o our knowledge, this is the first study to specifically report on ART outcomes among African MSM' (Graham, Mugo, and Gichuru *et al* 2013: 1265).

Graham, Mugo, and Gichuru *et al*'s pilot study set out to test their hypothesis that 'Kenyan MSM would have delayed engagement in care, lower ART adherence, and worse clinical outcomes compared to high-risk men and women participating in the same HIV-1-seropositive cohort' (p1256). Their results confirmed that MSM had comparatively poor ART outcomes despite a 'research program specifically oriented towards engaging MSM in care, with counsellors trained in male sexual health' (p1263). The discussion of results does not seem to address their first hypothesized assertion that MSM would display delayed engagement in care. Indeed, in seeming contradiction to their assertion, in the discussion of the three cohorts at baseline, it is identified that 'there were no differences in CD4 count, WHO stage, nutritional status, illness, or prior TB' at the point of initiating treatment, suggesting that MSM are willing to participate in a treatment programme at the same clinical stage as the high-risk heterosexual men and women in the cohort' (p1259).

The study highlights that retention in care was similar across MSM, high-risk heterosexual male and female participants, but this did not translate equally into ART adherence. The research

team found that ‘although men and women had similar health status at ART initiation, MSM had lower adherence... (40% of MSM had adherence <95%, versus 28.6% of heterosexual men and 11.5% of women (FE $p = 0.047$))’ (p1261). The study fails to identify the causes of this lower adherence, indicating ‘it is unclear why the MSM in our study had worse overall adherence...’ (p1263).

Yet, age as a variable, which were not controlled for, may have played a role in levels of ART adherence. Looking at the results, independently of the study’s analysis, there appears to be a positive correlation between participant drop-out and younger patients, across the cohort. The MSM group was made up of a moderately younger demographic – 24.% MSM versus just 6.7% heterosexual men, and 19.7% women were aged 18-24 years; and just 16.7% MSM versus 26.7% heterosexual men, and 26% women were aged 35 years and older (p1257). The lack of control for the age variable may distort the analysis of the gender and sexuality variables that preoccupy this study, and suggests exploring age as a factor in rates of ART adherence.

In a similar vein, a consideration of the impact that non-disclosure of HIV status may have on adherence would be interesting given disparities by group across the cohort – 67.6% MSM versus 57.1% heterosexual men, and 47.6% women reported non-disclosure of HIV status – and the extent to which sexuality plays a role in disclosure. Interesting to note also is that transactional sex and alcohol (ab)use, as challenges to ART adherence, were recorded at higher rates among the high-risk heterosexual women’s cohort than among the MSM cohort (85% women versus 70.4% MSM involved in transactional sex, and 70.9% women versus 62% MSM using alcohol), yet the women’s group had higher reported rates of ART adherence. This would seem to suggest that the sexuality of men who have sex with men has a greater negative effect on ART adherence, than engagement in transactional sex and use of alcohol, again underlining the need for further research on the implications of sexuality in HIV treatment.

The small and localised sample group, and the inability to probe further in qualitative interviews with the participants, means that the correlations between the demographic disparities between cohort groups, and the rates of adherence reported in the results cannot be taken further without conducting a fresh study.

Recommendations for further research

Research is needed to explore the linkages between criminalisation, discrimination, and (double) stigma experienced by (HIV positive) MSM and LGBTI communities, and their challenges to ART adherence, in east and southern Africa.

The literature review reveals that (globally) research is dominated by MSM, largely to the exclusion of lesbians, (particularly female) bisexuals, transgender persons, and intersex persons. The perceptions from the pilot study also suggest male sex workers are a significant sub-population within the MSM community, possibly distorting research and intervention results if they are conflated. Therefore, further research is required to investigate the sometimes indistinct and overlapping identities (and vulnerabilities) of MSM and the sub-population of male sex workers, and LGBTI to better delineate what challenges to ART adherence are particular to each.

References

- amfAR (2014) *Delivering Results on LGBT Research in Kenya*, www.amfar.org/Around-the-World/GMT/GMT-Blog/Delivering-Results-on-LGBT-Research-in-Kenya/ accessed 25 July 2015
- Beyrer C., Wirtz A., Walker D., Johns B., Sifakis F., and Baral S. (2011) 'The Global HIV Epidemics among Men Who Have Sex with Men' *The World Bank*
- Cock, K. (2009) 'Preventing HIV transmission with antiretrovirals' *Bulletin of the World Health Organization*; 87:488-488
- Graham S., Mugo P., Gichuru E., Thiong'o A., Macharia M., Okuku H., Elst E., Price M., Muraguri N., and Sanders E. (2013) 'Adherence to Antiretroviral Therapy and Clinical Outcomes Among Young Adults Reporting High-Risk Sexual Behaviour, Including Men Who Have Sex with Men, in Coastal Kenya' *AIDS and Behavior*17:1263
- Kobin, A., and Sheth, N. (2011) 'Levels of Adherence Required for Virologic Suppression Among Newer Antiretroviral Medications Studies' *The Annals of Pharmacotherapy*, March, Volume 45 I 373
- Mitiku H., Abdosh T., and Teklemariam Z. (2013), 'Factors Affecting Adherence to Antiretroviral Treatment in Harari National Regional State, Eastern Ethiopia' *ISRN AIDS, Volume 2013, Article ID 960954*
- Nakiyemba D., Aurugai R., and Thomas O. (2006) *Factors that facilitate or constrain adherence to antiretroviral therapy among adults in Uganda: a pre-intervention study*, ch.3, pp.263-270
- Paterson D., Swindells S., Mohr J., Brester M., Vergis E., Squier C., Wagener M., and Singh N. (2000) 'Adherence to protease inhibitor therapy and outcomes in patients with HIV infection' *Annals of Internal Medicine*, 133(1):21-30
- Scanlon M., and Vreeman R. (2013) 'Current strategies for improving access and adherence to antiretroviral therapies in resource-limited settings' *HIV/AIDS - Research and Palliative Care Volume 2013:5 Pages 1-17*
- Schneiders M. (2014) 'Values and preferences of transgender people: a qualitative study to inform the Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations development process' *World Health Organisation*
- Smith A., Tapsoba P., Peshu N., Sanders E., and Jaffe H. (2009) 'Men who have sex with men and HIV/AIDS in sub-Saharan Africa' *Lancet*; 374:416-22.
- UNAIDS (2010) *Global Report Fact Sheet, Sub-Saharan Africa*
- UNAIDS (2013) *Getting to Zero: HIV in Eastern and Southern Africa*
- UNAIDS (2014) *The Gap Report*
- WHO (2014) *Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care for Key Populations*, WHO Press, Geneva, ISBN 978 92 4 150743 1

Glossary

Antiretroviral therapy or antiretroviral treatment (ART) refers to a triple or more antiretroviral drug combination.

Lesbian is a woman who is sexually attracted to other women

Bisexual is used to describe a person who is physically, romantically, and emotionally attracted to men and women.

Gay The term 'gay' can refer to same-sex sexual attraction, same-sex sexual behaviour, and same-sex cultural identity. In accordance with UNAIDS 2011 terminology guidelines, 'men who have sex with men' has been the preferred term throughout this report.

Gender identity refers to each person's deeply felt internal and individual experience of gender, which may or may not correspond with the sex assigned at birth, including the personal sense of the body, and other expressions of gender, including dress, speech and mannerisms.

Homophobia is fear, rejection, or aversion, often in the form of stigmatising attitudes or discriminatory behaviour, towards homosexuals and/or homosexuality.

HIV-positive A person who is HIV-positive has had antibodies against HIV detected on a blood test or gingival exudate test (commonly known as a saliva test). Synonym: seropositive

Human immunodeficiency virus (HIV) is the virus that weakens the immune system, ultimately leading to AIDS. Since HIV means human immunodeficiency virus, it is redundant to refer to the 'HIV virus'.

Intersex An intersex person is an individual with both male and female biological attributes (primary and secondary sexual characteristics).

LGBTI is used in preference to 'homosexuals' as this term tends to make lesbians invisible, does not encompass bisexuals and transgender people and may be considered offensive by many gays and lesbians.

Men who have sex with men (MSM) MSM is an abbreviation used for 'men who have sex with men' or 'males who have sex with males'. The term applies to men who have sex with men, regardless of whether or not they also have sex with women or have a personal or social gay or bisexual identity. This concept is useful because it also includes men who self-identify as heterosexual, but have sex with other men.

People living with HIV (PLHIV) reflects the fact that an infected person may continue to live well and productively for many years

Prevalence Usually given as a percentage, HIV prevalence quantifies the proportion of individuals in a population who are living with HIV at a specific point in time

Sexual orientation refers to a person's capacity for profound emotional, affectional and sexual attraction to, and intimate and sexual relations with, individuals of a different gender or the same gender, or more than one gender.

Stigma and discrimination 'Stigma' is derived from the Greek meaning a mark or a stain. Stigma can be described as a dynamic process of devaluation that significantly discredits an individual in the eyes of others. Within particular cultures or settings, certain attributes are

seized upon and defined by others as discreditable or unworthy. When stigma is acted upon, the result is discrimination that may take the form of actions or omissions. Discrimination refers to any form of arbitrary distinction, exclusion, or restriction affecting a person, usually but not only by virtue of an inherent personal characteristic or perceived belonging to a particular group—in the case of AIDS, a person's confirmed or suspected HIV-positive status—irrespective of whether or not there is any justification for these measures. The term 'stigmatisation and discrimination' has been accepted in everyday speech and writing and may be treated as plural.

Transgender is an umbrella term for all people whose internal sense of their gender (their gender identity) is different from the biological sex they were assigned at birth. Transgender does not imply any specific form of sexual orientation and may include transsexuals and cross-dressers. They could identify as female-to-male or male-to-female, and may or may not have undergone surgery and/or hormonal therapy

Appendix

Record of database searches

Web of Science:

Searched 'HIV treatment' antiretroviral adherence

Refined with: 'men who have sex with men' gay LGBTI

Refined further: Africa* Kenya Uganda

Resulted in 183 (all databases). 1 publications sourced as relevant

Selection process based (in this order) on relevance of title, then abstract, then by scanning document.

Pubmed:

Searched ('HIV treatment'[Title/Abstract] OR antiretroviral[Title/Abstract] OR adherence[Title/Abstract]) AND ('men who have sex with men'[Title/Abstract] OR gay[Title/Abstract] OR LGBTI[Title/Abstract]) AND (Africa*[Title/Abstract] OR Uganda[Title/Abstract] OR Kenya[Title/Abstract]) AND ('2010'[Date - Publication] : '3000'[Date - Publication])

Resulted in 77 (all databases). 0 publications sourced as relevant

Selection process based (in this order) on relevance of title, then abstract, then by scanning document.

ScienceDirect:

Searched: > 2009 and TITLE-ABSTR-KEY((HIV treatment) antiretroviral adherence) AND LIMIT-TO(topics, 'art, haart, adherence, antiretroviral therapy')

Resulted in 88 (all databases). 0 publications sourced as directly relevant

Selection process based (in this order) on relevance of title, then abstract, then by scanning document.

African Journals Online (AJOL):

Searched: treatment OR antiretroviral AND adherence

Filter - > 2009 and Keyword(s): 'Men who have sex with men' OR gay OR LGBTI

Resulted in 43 (all journals). 0 publications sourced as directly relevant

Selection process based (in this order) on relevance of title, then abstract, then by scanning document.

World Health Organisation Institutional Repository for Information Sharing (iris.)

Searched: 'men who have sex with men' OR gay OR LGBTI

Filter - > 2009 and Refined: 'HIV infections' option

Resulted in 56 (all of WHO IRIS). 2 publications sourced as directly relevant

Due to the large number of documents closely aligned in theme to the focus of this literary review, publications were judged for relevance by running combinations of key word searches that includes at least one of the following terms: 'men who have sex with men' 'MSM' 'gay' 'adherence' and 'ART'. Selection of these search terms was based on the theme of the literature i.e. a report on adherence would be searched using the thematic terms 'men who have sex with men' 'MSM' 'gay' rather than 'adherence' and 'ART'.

UNAIDS Corporate UNAIDS Publications:

Searched: treatment antiretroviral adherence 'men who have sex with men' gay LGBTI

Resulted in 22 (operating a Google site-search). 0 publications sourced as directly relevant

Google:

Searched: Exact phrase - 'treatment adherence', 'antiretroviral adherence', 'men who have sex with men' Any of these words - Africa* OR Kenya OR Uganda OR gay OR LGBTI -America - American -Americans -USA -India -China -Thailand -UK -Asia -PreP -PEP

Resulted in 42 (operating a Google site-search). 0 publications sourced as directly relevant

The Google.com advanced search tool was utilised. The search parameters in Google were stricter and included more exclusions than other database searches. This was a pragmatic decision to focus the search sufficiently to permit due consideration of every search result, impractical were the number of results to escalate into the thousands.

In addition to the filtering parameters set out in the methodology, results were excluded that led to linked searches on other databases, but links to direct publications and 'grey literature' were pursued. Every link in the results listing was loaded and checked for relevance. There were a number of links to pages that could not be found. Studies that had previously been located via the databases above were ignored.

About HEARD

HEARD is a leading applied research centre with a global reputation for its research, education programmes, technical services, partnerships and networks, devoted to addressing the broad health challenges of Africa. HEARD's aim is to shape public health policy and practice in order to reduce health inequalities in Africa and to improve the reach, comprehensiveness and quality of health services delivery throughout the region. HEARD's work entails catalysing, conducting and disseminating innovative research on the socio-economic aspects of public health, especially the African HIV and AIDS pandemic. HEARD was established in 1998 and is based at the University of KwaZulu-Natal, South Africa.

Contact us

Email HEARDresearch@ukzn.ac.za
Telephone +27 (0)31 260 2592
Fax +27 (0)31 260 2587
Post University of KwaZulu-Natal
Westville Campus
Private Bag X54001
Durban
4000
South Africa
Web www.heard.ac.za



UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI