



Emerging themes for sensitivity training modules of African healthcare workers attending to men who have sex with men: a systematic review

Maartje Dijkstra^{a,*}, Elise M. van der Elst^a, Murugi Micheni^a, Evanson Gichuru^a, Helgar Musyoki^b, Zoe Duby^c, Joep M.A. Lange^{d,e†}, Susan M. Graham^{a,f} and Eduard J. Sanders^{a,e,g}

^aKenya Medical Research Institute, Centre for Geographic Medicine Research–Coast, P.O. Box 230, Kilifi, Kenya; ^bNational AIDS and STI Control Programme, P.O. Box 19361–00202, Nairobi, Kenya; ^cDesmond Tutu HIV Foundation, Anzio Road, Observatory 7705, Cape Town, South Africa; ^dAmsterdam Institute for Global Health Development, University of Amsterdam, P.O. Box 22700 1100 DE, Amsterdam, The Netherlands; ^eDepartment of Global Health, Academic Medical Centre, University of Amsterdam, P.O. Box 22700 1100 DE, Amsterdam, The Netherlands; ^fUniversity of Washington, Seattle, WA 98195, USA; ^gNuffield Department of Clinical Medicine, University of Oxford, Oxford OX3 7BN, UK

*Corresponding author: Tel: +31 625087466; E-mail: maartje.dijkstra@amc.nl

†Deceased

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Sensitivity training of front-line African health care workers (HCWs) attending to men who have sex with men (MSM) is actively promoted through national HIV prevention programming in Kenya. Over 970 Kenyan-based HCWs have completed an eight-modular online training free of charge (<http://www.marps-africa.org>) since its creation in 2011. Before updating these modules, we performed a systematic review of published literature of MSM studies conducted in sub-Saharan Africa (sSA) in the period 2011–2014, to investigate if recent studies provided: important new knowledge currently not addressed in existing online modules; contested information of existing module topics; or added depth to topics covered already. We used learning objectives of the eight existing modules to categorise data from the literature. If data could not be categorised, new modules were suggested. Our review identified 142 MSM studies with data from sSA, including 34 studies requiring module updates, one study contesting current content, and 107 studies reinforcing existing module content. ART adherence and community engagement were identified as new modules. Recent MSM studies conducted in sSA provided new knowledge, contested existing information, and identified new areas of MSM service needs currently unaddressed in the online training.

Keywords: ART adherence, Community engagement, Healthcare worker, MSM sensitivity training, Sub-Saharan Africa

Introduction

Men who have sex with men (MSM) in sub-Saharan Africa (sSA) are at high risk for HIV and other sexually transmitted infections (STIs) and require urgent interventions to reduce acquisition and transmission.¹ However, as a result of discriminatory legislation, many African countries do not recognise or address the needs of MSM in the context of national HIV/AIDS prevention and control programmes.² Grass roots initiatives in several African countries, and stakeholder consultations have started to shape comprehensive services and HIV preventive research agenda for MSM.^{3,4} Although WHO recently provided consolidated guidelines on the *Prevention, Diagnosis, Treatment and Care of Key Populations*,⁵

acceptance of MSM as equal citizens entitled to quality healthcare and prevention information is still in jeopardy in most African countries.⁶

As MSM are stigmatised in society and in healthcare facilities, they face substantial barriers to accessing healthcare services,^{7–9} and care seeking is often delayed.¹⁰ Front-line healthcare workers (HCWs) in sSA do not receive basic training on how to counsel MSM clients, or diagnose and treat rectal STIs.¹¹ In Kenya, HCWs felt that they must be equipped with the knowledge and skills necessary to provide such services.¹²

Until recently, training guides providing information about MSM specifically addressing the needs of front-line HCWs in Africa were rare. In 2009, the Desmond Tutu HIV Foundation in South Africa

and the Kenya Medical Research Institute in Kenya, in collaboration with the University of Oxford, developed the manual *MSM: An Introductory Guide for Health Workers in Africa*, based on expert opinion and the limited information available from African MSM studies. This manual was updated in 2011, using literature of MSM studies in sSA available until 2011. The revision received input from external reviewers who were experienced with MSM studies and services in sSA. Soon after revision of the manual in 2011, WHO released guidelines on the *Prevention and Treatment of HIV and other Sexually Transmitted Infections among MSM and Transgender People*.¹³

The training comprises eight modules: MSM and HIV in sub-Saharan Africa; Homophobia: stigma and its effects; Sexual identity, coming out and disclosure; Anal sex and common sexual practices; HIV and STIs; Condom and lubricant use; Mental health: anxiety, depression and substance use; and Risk-reduction counselling. The online version (<http://www.marps-africa.org>) of the second edition is frequently used in Kenya and over 970 HCWs, including over 420 government HCWs, have completed it, either through self-training or facilitated learning (E. Sanders, personal communication).

The effect of this training programme upon HCW knowledge and attitudes was evaluated in 71 Kenyan HCWs in 2012, and showed significant improvements in knowledge of MSM sexual health issues and reduced homophobic attitudes up to three months after the training.¹⁴ Didactic content as well as opportunities for group reflection empowered HCWs to discuss MSM behaviour and anal sex. HCWs acknowledged the existence of MSM in

their clinics and recognised their own professional responsibility to provide appropriate and effective services. Challenges in the context of broader societal homophobia called for the urgent scale up of such culturally adapted and specialised training programmes for African HCWs.¹¹

As the training guide was last updated in 2011 and many studies in African MSM have since been published, we set out to assess if newly published literature on MSM and HIV prevention and care in sSA would require a training guide update. Additionally, by using the eight existing modules of the training guide as a framework we expected to identify new areas of MSM services needs that were unaddressed in the current training guide.

Methods

We conducted a comprehensive search in PubMed of peer-reviewed MSM studies conducted in sSA and published from January 2011 to March 2014. We used specific search terms and Medical Subject Headings (MeSH) such as ‘Africa South of the Sahara’, ‘sub-Saharan Africa’, ‘men who have sex with men’, ‘homosexuality, male’, ‘gay’ and ‘homosexual’. Figure 1 summarises the search and screening process. For an overview of the full electronic search see [Supplementary File 1](#).

The full search included papers published between 1 January 2011 and 25 March 2014. Learning outcomes and objectives of the existing eight modules in the training guide are summarised in [Box 1](#) and constitute our framework against which studies

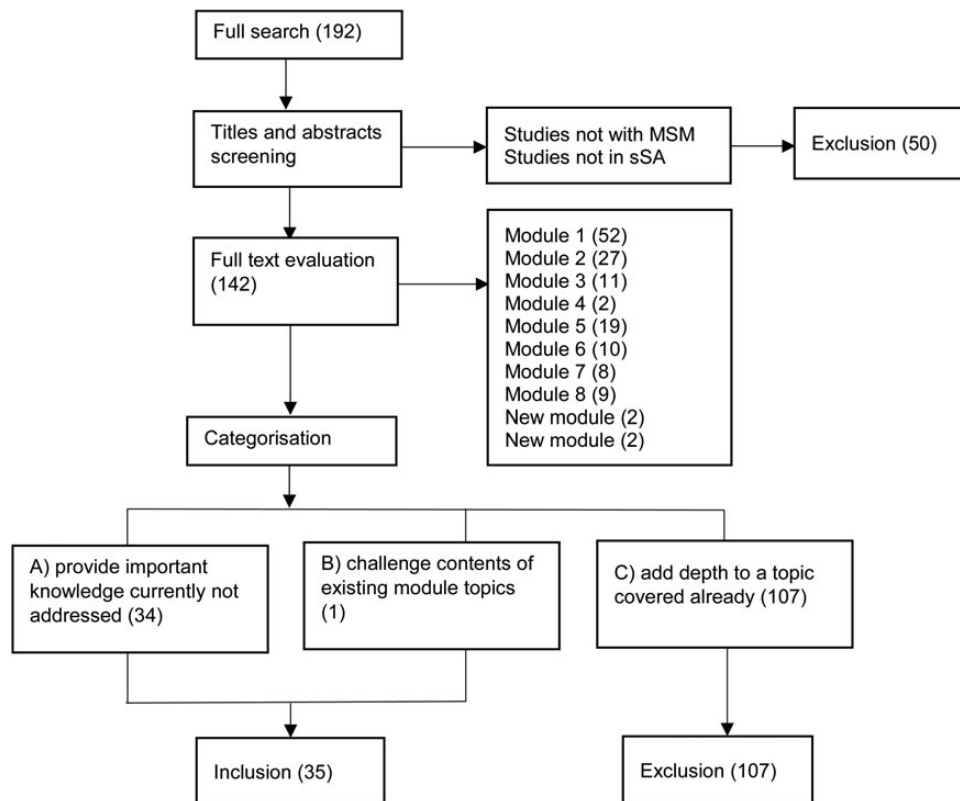


Figure 1. Search and screening process of PubMed search, period 1 Jan 2011 to 25 March 2014. MSM: men who have sex with men; sSA: sub-Saharan Africa.

Box 1. Review framework: learning outcomes and objectives of existing training modules, topics identified in literature requiring module updates, and new topics identified requiring new modules

Module title, and learning outcome and objectives	Existing topics requiring update
<p>Module 1: MSM and HIV in sub-Saharan Africa</p> <ol style="list-style-type: none"> 1. Defining MSM 2. MSM and HIV risks in sub-Saharan Africa 3. Epidemiology of HIV in MSM in sub-Saharan Africa 	<p>Group sex HIV-1 incidence estimates Dual epidemics MSM population size estimation Frequency of same sex behaviour</p>
<p>4. Health service accessibility and health seeking behaviour of MSM</p> <p>Module 2: Homophobia: stigma and its effects</p> <ol style="list-style-type: none"> 1. Defining stigma 2. Defining homophobia 3. The effect of stigma on MSM and their health 	<p>Internalised homophobia Stigma, fear, and health care seeking Secondary stigma of HCW Training of HCW</p>
<p>4. Double stigma of HIV positive MSM</p> <p>5. Supporting stigmatised clients</p> <p>Module 3: Sexual identity, coming out and disclosure</p> <ol style="list-style-type: none"> 1. Defining sexual orientation, sexual identity, and sexual behaviour 2. Sexual behaviour of MSM 3. Coming out process 4. Prejudice, discrimination and stereotypes 	<p>Gay identity</p>
<p>Module 4: Anal sex and common sexual practices</p> <ol style="list-style-type: none"> 1. Defining anal sex and role taking 2. Other sexual practices of MSM 3. Risk levels of different sexual practices 4. Discussing anal sex with clients 	<p>MSW and anal sex with women</p> <p>Methods of risk assessment</p>
<p>Module 5: HIV and STIs</p> <ol style="list-style-type: none"> 1. Common STIs amongst MSM 2. Discussing STIs with clients 3. STI transmission 4. Treating STIs 	<p>Multi-drug resistance of NG WHO presumptive treatment recommendation for asymptomatic rectal infections</p>
<p>5. Link between STIs and HIV infection</p> <p>6. PrEP and PEP for HIV</p>	<p>Acceptability of PrEP Adherence to PrEP PrEP for specific risk groups Health care seeking during AHI Clinical predictors of AHI</p>
<p>7. Acute HIV infection and early access to HIV care</p> <p>Module 6: Condom and lubricant use</p> <ol style="list-style-type: none"> 1. Effectiveness of condoms for preventing HIV and STIs 2. Male and female condoms 3. Lubricants and their effect on the male latex condom 4. Tailored condom promotion messages for MSM 5. Condom and lubricant use among MSM 	<p>Water-based lubricants and acquisition of HIV</p>
<p>Module 7: Mental health: anxiety, depression and substance abuse</p> <ol style="list-style-type: none"> 1. Defining anxiety and depression 2. Symptoms and signs 	

Continued

Box 1. *Continued*

Module title, and learning outcome and objectives	Existing topics requiring update
3. Particular vulnerabilities of MSM	Religion and feelings of fear Risk factors for poor mental health
4. Particular vulnerabilities of people living with HIV/AIDS	
5. Dealing with depressed/anxious clients	Frequency of depression
6. Substances commonly used by MSM	
7. Linking substance abuse and HIV infection	
Module 8: Risk reduction counselling	
1. Defining risk reduction counselling	
2. Risk reduction counselling with MSM	
3. HIV testing in MSM	Acceptance of couples counselling and testing
New modules	New topics requiring new modules
New module: MSM and ART	
Learning objectives to be determined	ART initiation and adherence Treatment as prevention
New module: Community engagement & LGBT organisations	
Learning objectives to be determined	MSM / LGBT organisations Community driven HIV prevention Peer education and condom use

AHI: acute HIV infection; ART: antiretroviral therapy; HCW: healthcare worker; LGBT: lesbian, gay, bisexual, transgender; MSM: men who have sex with men; MSW: male sex workers; NG: *Neisseria gonorrhoea*; PEP: post-exposure prophylaxis; PrEP: pre-exposure prophylaxis; STI: sexually transmitted infection.

were assessed. To fulfil the inclusion criteria, studies were screened and evaluated to determine whether they: (A) provide important knowledge currently not addressed in existing modules; (B) challenge contents of existing modules; and (C) add depth to a topic covered already. If important new information emerged that was not covered in the eight existing modules, suggestions for new modules to cover this information were made.

It was agreed that studies classified under categories A and B would require a training guide revision, and that revisions related to those studies classified under category C would be discretionary.

Two independent reviewers (MD and EvdE) evaluated each citation for inclusion and scored citations according to the three categories. First, titles and abstracts were screened to make an initial categorisation according to module topics. Then, all full text articles were reviewed by the two independent reviewers. The final lists of citations provided for inclusion by the two reviewers were compared, and discrepancies between them were resolved by discussion with a third reviewer (EJS).

Results

We identified 192 published papers. After screening the abstracts, 50 studies were excluded (i.e., studies not conducted in sSA and studies not conducted with MSM populations); 142 full text articles met our framework criteria for this review. These included 34 articles in category A, one article in category B, and 107 articles in category C (Supplementary File 2). Box 1 presents the learning

objectives of the existing modules, module topics requiring updates and new module topics identified. Table 1 summarises results of studies that will be used for module updates. These results are discussed below:

Module 1: MSM and HIV in sub-Saharan Africa

Module 1 includes learning objectives on ‘MSM and HIV risks’ and the ‘epidemiology of HIV in MSM’, but does not mention the size of MSM populations in sSA, HIV-1 incidence estimates among MSM in sSA, or that group sex is an independent predictor of HIV-1 acquisition, nor the extent to which MSM act as a bridging population of HIV transmission (Box 1). Two studies from Zanzibar and Kenya estimated that about 1–2% of the general male population has sex with other men.^{15,16} A large household survey conducted in South Africa found 5.4% (94/1705) of adult men reporting any consensual activity with another man in their lifetime, and 1.8% (28/1705) reported ever having had anal sex with a man.¹⁷

Four studies estimated the HIV-1 incidence among MSM in sSA. These include three studies conducted in Kenya from two cohort sites in the period 2006–2012, and one repeated cross-sectional pilot study performed in Senegal in 2013.^{18–21} The Kenyan HIV-1 incidence estimates range from 8.6–10.9%, and both populations included substantial numbers of male sex workers (MSWs).^{18,20,21} The Senegalese HIV-1 incidence estimate was 16%, but participation in sex work was not recorded.¹⁹ A remarkable finding is the stratification of HIV-1 incidence by sexual orientation in coastal

Table 1. Results of the systematic review of MSM studies in sSA providing new knowledge (A) to, or challenging content (B) currently not addressed in 'Men who have sex with men; an introductory guide for health workers in Africa', period Jan 2011 to 25 March 2014

First author	Year	Journal	Country of study	Type of study	n	New knowledge (A) or challenging content (B) requiring module updates
Module 1: MSM and HIV in sub-Saharan Africa						
Price ¹⁸	2012	J Acquir Immune Defic Syndr	Kenya	Cohort	73	HIV incidence for Nairobi, Kenya 2006–2008: 9.7 (95% CI 5.4–17.5)/100 PY (MSM). (A)
Drame ¹⁹	2013	J Int AIDS Soc	Senegal	Repeated cross-sectional (quantitative)	40	HIV incidence: 16 (95% CI 4.6–27.4)/100 PY (MSM). (A)
Dunkle ¹⁷	2013	Plos Med	South Africa	Cross-sectional (quantitative)	1705	5.4% (94/1705, 95% CI 4.4–6.6) of men reported any consensual sexual activity with another man: 2.8% (47/1705) reported mutual masturbation; 1.8% (30/1705) thigh sex; 1.8% (30/1705) anal sex; 1.7% (29/1705) oral sex; and 1.7% (28/1705) did not specify. (A)
Ndiaye ²²	2013	AIDS Res Hum Retroviruses	Senegal	Cross-sectional (phylogenetic analyses)	97	High prevalence of subtype C in Senegalese MSM; pattern of strains different between MSM and general population groups. (A)
Okal ¹⁵	2013	Sex Transm Inf	Kenya	Size estimation (several methods)	NR	Estimated size for MSM population in Nairobi: 11 042 persons (range: 10 000–22 222). (A)
Sanders ²⁰	2013	AIDS	Kenya	Cohort	449	Overall HIV incidence: 8.6 (95% CI 6.7–11.0); 5.8 (95% CI 4.2–7.9)/100 PY (MSMW) and 35.2 (95% CI 23.8–52.1)/100 PY (MSME). Group sex reported by 16.3% of MSM and strongly associated with HIV-1 acquisition (aIRR 1.9, 95% CI 1.0–3.4). (A)
Bezemer ²³	2014	AIDS Res Hum Retroviruses	Kenya	Cross-sectional (phylogenetic analyses)	84	HIV transmission between MSM and heterosexual population is uncommon. (A)
Khalid ¹⁶	2014	AIDS Behav	Zanzibar (Tanzania)	Size estimation (several methods)	NR	Estimated size for MSM population in Zanzibar: 0.9% of men ≥15 years (2157 MSM). (A)
McKinnon ²¹	2014	Sex Transm Inf	Kenya	Cohort	181	HIV incidence: 10.9 (95% CI: 7.4–15.6)/100 PY (MSW). (A)
Module 2: Homophobia: Stigma and its effects						
Fay ²⁵	2011	AIDS Behav	Malawi, Namibia, Botswana	Cross-sectional (quantitative)	537	MSM who had any interaction with healthcare had higher odds of experiencing fear of seeking healthcare (OR 2.55, 95% CI 1.63–3.98) and of having been denied healthcare due to sexual orientation (OR 6.38, 95% CI 2.53–16.11). (A)
Adebajo ²⁴	2012	Afr J Reprod Health	Nigeria	Cross-sectional (quantitative)	1125	Internalised homophobia in MSM was associated with self-identification as bisexual (aOR 2.1, 95% CI 1.6–2.9) and HIV infection (aOR 1.8, 95% CI 1.2–2.7). (A)
Van der Elst ¹⁴	2013	J Int AIDS Soc	Kenya	Repeated cross-sectional (quantitative)	74/71	HCW training resulted in improvements of MSM sexual health knowledge-scores of 12% (IQR 4–21%) among HCW and 80% (57/71) showed decreased homophobic attitudes three months post training. (A)
Van der Elst ¹¹	2013	J Int AIDS Soc	Kenya	Qualitative (FGDs)	74	HCW described secondary stigma, lack of professional education about MSM, and personal and social prejudices as barriers to serving MSM clients. (A)

Continued

Table 1. *Continued*

First author	Year	Journal	Country of study	Type of study	n	New knowledge (A) or challenging content (B) requiring module updates
Module 3: Sexual identity and coming out						
Lane ²⁷	2011	AIDS Behav	South Africa	Cross-sectional (quantitative)	378	Gay identity associated with increased odds for HIV infection (aOR 2.3, 95% CI 1.8–3.0). (A)
Moen ²⁶	2014	J Homosex	Tanzania	Ethnographic and qualitative (IDIs)	±250/105	Tanzanian gay identity not similar to ‘western’ gay identity (A)
Module 4: Anal sex and common sexual practices						
Mannava ²⁸	2013	PLoS One	Kenya	Cross-sectional (quantitative)	867	MSW frequently engage in heterosexual anal intercourse: 65.7% (88/134) with female clients and 42.9% (108/252) with non-paying female partners. (A)
Adebajo ²⁹	2014	PLoS One	Nigeria	Cross-sectional (quantitative)	712	MSM interviewed by ACASI were more likely to self-identify as homosexual (aOR 3.3, 95% CI 2.4–4.6), to report multiple female partners (aOR 1.4, 95% CI 1.1–1.9), multiple male partners (aOR 2.1, 95% CI 1.5–2.8), anal sex with women (aOR 13.1, 95% CI 7.9–21.7), unprotected anal sex with women (aOR 2.1, 95% CI 1.1–4.1), and STI symptoms (aOR 2.9, 95% CI 2.1–4.1) compared to face-to-face interview methods. (A)
Module 5: HIV and STIs						
Sanders ³⁰	2011	AIDS	Kenya	Case series	72	The majority (69%; 50/72) of adults with acute HIV infection seek urgent healthcare. (A)
Eisingerich ³⁴	2012	PLoS One	Peru, Ukraine, India, Kenya, Botswana, Uganda, South Africa	Cross-sectional (quantitative)	1790	The majority (61%) of potential user groups (MSM, SDC, FSWs, young women, and IDU) are willing to use PrEP. (A)
Mutua ³²	2012	PLoS One	Kenya	RCT	67	Adherence to daily dosing PrEP regimens may be better than adherence to other regimens in a phase I trial of 4 month duration. (A)
Lewis ³⁶	2013	J Antimicrob Chemother	South Africa	Case report	2	Two multi-drug resistant NG isolates described in MSM. (A)
Van der Elst ³³	2013	AIDS Behav	Kenya	Qualitative (FGDs / IDIs)	51	High acceptability of PrEP among MSM and FSW. (A)
Wahome ³¹	2013	AIDS	Kenya	Cohort	641	Fever, diarrhoea, symptomatic STI, fatigue, age 18–29 years, and discordant HIV test results were independent predictors of acute and early HIV-1 acquisition in high risk MSM. (A)
Sanders ³⁷	2014	Sex Transm Infect	Kenya	Cohort	147	Number needed to treat in WHO presumptive treatment recommendation for one asymptomatic NG/CT infection in MSM meeting criteria is 4. (A)

Continued

Buchbinder ³⁵	2014	Lancet Infect Dis	Brazil, Ecuador, Peru, South Africa, Thailand, USA	RCT	2499	PAF for unprotected RAI for HIV acquisition in MSM and transgender women was high (64%) and NNT for PrEP to prevent infection was relatively low (36%). (A)
Module 6: Condom and lubricant use						
Rebe ³⁸	2014	S Afr Med J	South Africa	Cross-sectional (osmolality analyses)	NR	Many of the water-based sexual lubricants available in South Africa are hyperosmolar. (B)
Module 7: Mental health: Anxiety, depression and substance abuse						
Mbetbo ⁴¹	2013	Cult Health Sex	Cameroon	Cross-sectional (quantitative) and qualitative (FGDs / IDIs)	45	Religious MSM reported to live in a permanent feeling of guilt and fear. (A)
Tucker ³⁹	2013	AIDS Care	South Africa	Cross-sectional (quantitative)	316	56.6% of MSM had symptoms of at least a mild depression, associated with increased odds of unprotected AI (aOR 2.54, 95% CI 1.56–4.15). (A)
McAdams-Mahmoud ⁴⁰	2014	J Homosex	South Africa	Cross-sectional (quantitative) and qualitative (IDIs)	22	Young, low-income MSM from religiously and culturally conservative backgrounds are especially vulnerable for minority stress. (A)
Module 8: Risk-reduction counselling with MSM						
Stephenson ⁴²	2012	AIDS Care	South Africa	Cross-sectional (quantitative)	449	89.9% (404/449) of MSM reported willingness to use couples-based HIV counselling and testing. (A)
Stephenson ⁴³	2013	AIDS Behav	South Africa	Qualitative (FGDs / IDIs)	42/29	High levels of willingness to use couples-based HIV counselling and testing among MSM. (A)
New modules						
New module: MSM and ART						
Graham ⁴⁴	2013	AIDS Behav	Kenya	Cohort	22	40% (10/25) of MSM had poor adherence to ART (<95%) and MSM had less robust on-treatment weight gain when compared to women (adjusted difference -3.5 kg/year). (A)
Wirtz ⁴⁵	2013	Int J STD AIDS	Peru, Ukraine, Kenya, Thailand	Modelling	NR	Expansion of ART among adults in combination with MSM interventions (e.g. outreach) may result in a 25% reduction in new infections among Kenyan MSM. (A)
New module: Community engagement & LGBT organisations						
Geibel ⁴⁶	2012	Sex Transm Inf	Kenya	Repeated cross-sectional (quantitative)	425 / 442	Exposure to peer educators (aOR 1.97, 95% CI 1.29–3.02) and ever having been counselled or tested for HIV (aOR 1.71, 95% CI 1.10–2.66) were associated with consistent condom use. (A)
Drame ³	2013	Cult Health Sex	Gambia, Guinea-Bissau, Guinea-Conakry, Senegal	Qualitative (IDIs) and literature review	±70	The importance of decriminalisation and MSM organisations in relation to HIV prevention and treatment programmes. (A)

ACASI: audio computer assisted self-interview; aIRR: adjusted incidence rate ratio; (a)OR: (adjusted) odds ratio; ART: antiretroviral therapy; CT: *Chlamydia trachomatis*; FGD: focus group discussion; FSW: female sex worker; HCW: healthcare worker; IDI: in-depth interview; IDU: injection drug users; MSME: men who exclusively have sex with men; MSMW: men who have sex with men and women; MSW: male sex worker; NG: *Neisseria gonorrhoea*; NR: not reported; PrEP: pre-exposure prophylaxis; PY: person-years; RAI: receptive anal intercourse; RCT: randomised controlled trial; SDC: heterosexual serodiscordant couples; sSA: sub-Saharan Africa.

Kenya; 5.8 per 100 person-years (PY) in men who had sex with men and women (MSMW), and 35.2 per 100 PY in men who had sex with men exclusively (MSME). Group sex was reported by 16.1% of MSM at cohort enrolment and was an independent predictor of HIV-1 acquisition in this cohort.²⁰ Two phylogeny studies conducted in Kenya and Senegal are the first studies to suggest the existence of ‘dual epidemics’ in which HIV-1 transmission in MSM populations appear to be largely separate from ongoing HIV-1 transmission in the general heterosexual population.^{22,23}

Module 2: Homophobia: stigma and its effect

Module 2 contains topics on MSM and stigma, with learning objectives on ‘the effect of stigma on MSM and their health’, and ‘supporting stigmatised clients’, but includes no quantitative data on fear of healthcare seeking as a result of discrimination, information on internalised homophobia, or the effect of MSM sensitivity training on HCWs. Four studies were identified to provide new knowledge to the myriad of factors that influence stigma and its effect in sSA.^{11,14,24,25} A survey performed in Nigeria found high levels of internalised homophobia among MSM, defined as ‘self-hatred and shame resulting from negative stereotypes, beliefs and prejudice about homosexuality leading to devaluation and internal conflicts’.²⁴ Men who self-identified as bisexual and men who were HIV positive were twice as likely to experience internalised homophobia. A study conducted in Malawi, Namibia and Botswana showed strong associations between MSM’s experiences of discrimination and fear of seeking health care services.²⁵ A two-day training intervention (i.e., the online course discussed in this paper) addressing knowledge and attitudes among Kenyan HCWs demonstrated a reduction in HCW homophobic sentiment, and significant sustained improvements in knowledge three months post training.¹⁴ Qualitative data from Kenya revealed that HCWs who had undergone the MSM sensitivity training experienced secondary stigma from HCW colleagues who had not been trained.¹¹

Module 3: Sexual identity and coming out

Module 3 provides information on sexual orientation, sexual identity and sexual behaviour, but no information on gay identity is included. Two studies contributed to a deeper understanding of sexual identity and risk behaviours during sexual encounters between men.^{26,27} In the first study, Moen et al. described role taking in anal intercourse between MSM in Dar es Salaam. Role taking was seen as a fixed and enduring characteristic of a person, rather than a versatile role or position in sexual intercourse. For the insertive partner, anal penetration was seen as a desirable practice irrespective of whether the partner was male or female. These authors concluded that gay identity in Africa may be dissimilar to the ‘Western’ concept of gay identity.²⁶ In the second study, Lane et al. described how South African MSM who self-identified as gay were over two times more likely to be HIV positive compared to bisexual-identified MSM, demonstrating the particular vulnerability of this subgroup of MSM.²⁷

Module 4: Anal sex and common sexual practices

Module 4 contains learning objectives on ‘anal sex and role taking’ and ‘different sexual practices’, but does not discuss frequency of

heterosexual anal sex among MSM and their female partners or different methods to assess risk behaviours. A study conducted among Kenyan MSWs found unexpectedly high levels of self-reported anal sex with women: 65.7% (88/134) had recently had sex with a female client, and 42.9% (108/252) had recently had sex with a non-paying female partner.²⁸ For risk assessment, Adebajo et al. demonstrated that MSM assessed by audio computer assisted self-interview (ACASI) were more likely to report high risk sexual behaviour and to self-identify as homosexual than those assessed by face-to-face interviewing.²⁹

Module 5: HIV and STIs

Acute and early HIV infection

Module 5 includes very limited information on acute HIV-1 infection, and no information on healthcare seeking around the time of HIV-1 seroconversion. While little is known about healthcare seeking around the time of HIV seroconversion in sSA, two studies from coastal Kenya added new information. One study revealed that 69% (50/72) of adults (of which most men were MSM) seek urgent healthcare when acquiring HIV infection. These individuals are often presumptively treated for malaria.³⁰ A second study from coastal Kenya showed that six characteristics of a risk screening score (i.e., fever, diarrhoea, symptomatic STI, fatigue, age 18–29 years and discordant HIV test results) were independent predictors of acute and early HIV-1 acquisition in high risk MSM.³¹

Pre-exposure prophylaxis

Module 5 includes very little information on the use of Pre-exposure prophylaxis (PrEP). Since 2011, four studies, including two conducted in Kenya, were published on the effectiveness, usage, and acceptability of PrEP in sSA. A phase I randomised controlled trial (RCT) assessing PrEP adherence in MSM and female sex workers (FSWs) over four months demonstrated that intermittent PrEP regimens, particularly coitally-dependent dosing, were more difficult to adhere to than daily dosing regimens.³² Conducting qualitative assessments of selected MSM and FSWs from the afore mentioned trial, Van der Elst et al. reported high PrEP acceptability among Kenyan MSM and FSWs, but described challenges in adherence and use.³³ Acceptability of PrEP was also reported to be high among potential user groups (including MSM) in a large survey conducted in seven countries.³⁴ A secondary analysis of a phase III multi-country RCT of PrEP efficacy displayed how PrEP would be most effective at the population level if targeted toward only those MSM and transgender women who report unprotected receptive anal intercourse.³⁵

Other STIs

Module 5 provides very limited information on what HCWs should do when MSM present with an STI, including treatment recommendations for urethral or rectal discharge. The emergence of drug-resistant gonorrhoea among MSM is also not mentioned. One case report from South Africa reported multidrug-resistant *Neisseria gonorrhoea* isolates in two MSM.³⁶ A study in coastal Kenya evaluated the value of the WHO recommendation for presumptive treatment of *Neisseria gonorrhoea* and *Chlamydia*

trachomatis asymptomatic rectal infections in MSM reporting unprotected receptive anal intercourse in the past six months and either multiple sex partners or a partner with an STI.¹³ For every four MSM meeting these criteria, one infection would be treated in this population.³⁷

Module 6: Condom and lubricant use

Module 6 includes information on the effect of lubricants on male latex condoms, but the potential influence of osmolality of water-based lubricants on the safety of latex condoms is not discussed. An osmolality analysis of lubricants contributed to the assessment of lubricant safety, showing that many of the water-based sexual lubricants available in South Africa are hyperosmolar and therefore may cause epithelial damage and potentially increase HIV transmission.³⁸

Module 7: Mental health: anxiety, depression and substance abuse

Module 7 contains no information on risk factors for poor mental health outcomes for MSM and, to our knowledge, no formal assessment of mental health issues has been conducted in MSM in Africa. In a recent survey focusing on psychological factors associated with unprotected anal intercourse in South Africa, 56.6% of MSM scored symptoms of at least a mild depression.³⁹ Men who had higher scores were more than twice as likely to report unprotected anal intercourse. Another study from South Africa has shown that young, low-income MSM from religiously and culturally conservative backgrounds were especially vulnerable to minority stress, such as heterosexist societal stigma and discrimination experiences.⁴⁰ Qualitative findings from Cameroon reported that MSM experience emotional conflict as a result of being religious and MSM at the same time.⁴¹ Study participants felt trapped in a religion they had faith in, but which was not accepting them. Occasionally this even resulted in suicidal thoughts.

Module 8: Risk reduction counselling with MSM

Module 8 describes HIV testing and risk reduction counselling with MSM, but does not mention couples-based HIV testing and counselling (CHTC). Two studies conducted in South Africa assessed whether CHTC would be acceptable among MSM. In the first study, the majority (89.9%; 404/449) of men across all individual characteristics reported willingness to accept CHTC.⁴² In the second study, findings from focus groups and in-depth interviews showed overwhelmingly positive attitudes of MSM towards CHTC.⁴³

New module: MSM and ART

The training manual does not describe challenges of antiretroviral therapy (ART) initiation and adherence among MSM. In a research clinic-based study involving FSWs, heterosexual men and MSM conducted in coastal Kenya, 40% (10/25) of MSM had poor adherence to ART (<95%) vs 29% (2/7) of heterosexual men and 12% (3/26) of women.⁴⁴ In addition, MSM had less robust on-treatment weight gain than women. Demonstrating the importance of ART, a modelling analysis in Kenya showed that the expansion of ART among adults would have an evident impact on the MSM population.

In combination with other interventions targeting MSM (e.g., HIV testing) it would result in a 25% reduction of new infections in MSM.⁴⁵

New module: Community engagement and lesbian, gay, bisexual and transgender organisations

The training manual does not mention the potential impact of community engagement with regards to MSM's access to health-care. Two studies described the importance of lesbian, gay, bisexual and transgender (LGBT) organisations in sSA.^{3,46} A study conducted in four West African countries showed how MSM organisations supported decriminalisation and facilitated greater access to HIV prevention and treatment programmes.³ In Kenya, MSWs who had been exposed to a peer education intervention were two times more likely to consistently use condoms with their male clients than unexposed MSWs.⁴⁶

Discussion

This review of 'African MSM studies' published in the period 2011–2014 identified 142 studies, of which 35 provided new data requiring an update of the online training manual '*MSM: An Introductory Guide for Health Workers in Africa*'. All eight existing modules would benefit from being updated. In addition, two areas—ART adherence and community engagement—emerged as new modules needed to update the training guide.

To our knowledge, only one study has ever assessed clinical outcomes of ART in HIV positive MSM living in Africa.⁴⁴ The findings of this study suggest that focused approaches to increase ART adherence among MSM should be developed. We are aware of at least one such intervention that is currently in development.⁴⁷ Community engagement, under the principles respect, protect, and fulfil, including partnership between peer educators and HCWs and other community stakeholders to facilitate a safer environment for MSM to access healthcare, is an important area in its own right, and deserves recognition and involvement of local LGBT organisations.

New WHO guidelines on the *Prevention, Diagnosis, Treatment and Care of Key Populations*,⁵ and an online curriculum for health-care providers developed by the Global Forum on MSM and HIV (MSMGF) and Johns Hopkins University (<http://www.msmsgf.org/promotinghealth> [accessed 17 December 2014]) were both released in advance of the AIDS conference in July 2014, Melbourne, Australia. Both recommend providing PrEP to MSM as a component of a comprehensive HIV prevention package, including increased availability of condoms and lubricants, regular HIV testing, STI screening, and ART initiation at CD4 counts <500 cells/ml or immediately for specific conditions (i.e., a seronegative partner, active TB disease, hepatitis B virus infection with severe chronic liver disease). Kenya has adopted the recently revised WHO recommendation for ART initiation,⁴⁸ but will consider the provision of PrEP to MSM only in the context of research.⁴⁹

While national HIV prevention strategies addressing MSM are an essential step towards improving access to care for MSM, HCWs experience tension if same sex practices remain criminalised.⁵⁰ In Malawi, service providers reported concerns of adverse repercussions related to the provision of services to men in same sex sexual practices.⁵¹ In coastal Kenya, HCWs who had taken the online MSM training experienced secondary stigma from

colleagues who had not been trained.¹¹ In a two-year post training assessment of MSM services' provision in coastal Kenya, county AIDS coordinators expressed the wish that national government would endorse the MSM sensitivity training for HCWs.⁵²

This systematic review has several limitations. First, we included only data derived from published studies in the period 2011–2014. By excluding literature published before 2011, we may have missed important data currently not discussed in the current modules, which were developed based primarily on expert opinion. Second, our review was limited to peer-reviewed studies that were published in peer-reviewed journals. We did not conduct a comprehensive MSM training guideline review, or search databases for published reports of non-research programmes or campaigns targeted at African MSM. Such an expanded search would have illustrated potentially some of the pressing healthcare needs of MSM, and impressed on HCWs the significance of the sizes of various MSM groups arising in Africa.

Despite these limitations, we believe this work is a valuable step towards updating an important training curriculum. HCWs in sSA play a crucial role in reducing stigma and discrimination of MSM. Their knowledge needs to be accurate and up to date. Technical guidance on clinical care for MSM and a comprehensive training curriculum for HCWs working with MSM patients has recently been made available (<http://www.msmsgf.org/promotinghealth>) and an introductory manual on *Health Care Provision for MSM, Sex Workers, and People Who Inject Drugs* has been developed in South Africa in 2013.⁵³ Front-line HCWs in sSA would benefit from an accessible and basic introductory training manual that is tailored specifically to their region. This online manual has proven to be effective both in reducing homophobia and increasing knowledge.^{11,14}

Conclusions

Recent studies on MSM conducted in sSA provided new knowledge, contested existing information, and identified ART adherence and community engagement involving MSM as new topics for training. Given that the online training programme is regularly used, with over 970 Kenyan HCWs graduating since 2011, and is actively promoted by the National STI and AIDS Control Programme (NASCOP) in Kenya (<http://nascop.or.ke/>), an update of training materials would be beneficial.

Supplementary data

Supplementary data are available at International Health Online (<http://inthehealth.oxfordjournals.org/>).

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