

## ISSUES IN MEDICINE

**HIV prevention and treatment for South African men who have sex with men**

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Men who have sex with men (MSM) are at high risk for HIV acquisition and transmission owing to the high risks associated with unprotected anal sex and barriers to accessing appropriate health services. Globally HIV prevention is failing among MSM, as evidenced by high seroconversion rates. Prevention interventions for MSM are more limited than for heterosexual

individuals. Prevention programmes should embrace early initiation of antiretroviral therapy for positive clients as part of their programming. High transmission risk groups such as MSM will benefit from such interventions.

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Initiating antiretroviral therapy (ART) at a CD4 cell count of  $\leq 350$  cells/ $\mu\text{l}$  has better outcomes than postponing treatment until more immune system damage has occurred,<sup>1</sup> an opinion endorsed in expert guidelines from the World Health Organization, US Public Health and other academic institutions.<sup>2,3</sup> Some experts have motivated for even earlier ART initiation (CD4 count  $\leq 500$  cells/ $\mu\text{l}$ ) to improve patient outcomes and to lower viral loads in communities to decrease HIV transmission events, a strategy known as 'treatment as prevention.'<sup>4</sup> Better ART drugs and a rapid drug-

development pipeline favour earlier introduction of treatment. Until recently, the South African ART guidelines diverged from world opinion in delaying initiation in HIV-positive adults who are not pregnant or tuberculosis (TB) co-infected until a CD4 count of 200 cells/ $\mu\text{l}$  was reached.<sup>5</sup> The South African Government (SAG) has recently announced that it will raise the CD4 threshold to 350 cells/ $\mu\text{l}$  for all HIV-positive clients accessing state facilities for sponsored ART. This should be applauded and will provide an opportunity to lower transmission rates at community level, especially in groups who have the highest risk for HIV transmission, including men who have sex with men (MSM), commercial sex workers (CSWs), substance abusers, particularly intravenous drug users (IDUs), and serodiscordant couples.

Modelling studies demonstrate that targeted programmes addressing HIV among MSM positively impact on overall HIV rates in countries with generalised epidemics.<sup>6</sup> The Soweto Men's Study showed that 50% of African MSM participants also had sex with women, and high rates of HIV among MSM could be driving HIV incidence in South African women.<sup>7</sup> All South Africans might therefore benefit from an immediate move to initiate MSM on ART at a CD4 count of 350 cells/ $\mu\text{l}$ .

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**Background**

HIV transmission is dependent on the route of acquisition, the infecting viral load and the presence of inflammation and activated immune system cells below mucosal surfaces.<sup>8</sup> Addressing these factors lowers HIV transmissibility. Unprotected, especially receptive, anal sex remains a high-risk behaviour for HIV transmission with a transmission risk about 18 times higher than for penile-vaginal sex, and is a major driver of high HIV rates among MSM.<sup>9</sup>

IDUs who inject themselves with HIV-contaminated needles provide a direct access point for HIV, and established infection can therefore occur with relatively lower viral loads. CSWs are likely to transmit HIV if they become infected themselves because of the greater number of sex partners that they encounter. All these population groups benefit from targeted HIV programmes.

**Addressing HIV among MSM**

The odds ratio for African MSM testing HIV positive is 3.8 compared with their heterosexual male counterparts.<sup>10</sup> Data confirm that African MSM are a particularly vulnerable group, and a high HIV prevalence has been recorded in South Africa with rates ranging between 10.4% and 33.9%.<sup>7,11</sup> Reasons include the psychological impact of living in a heteronormative, stigmatising society, perceived barriers to health care, and sexual behaviours that facilitate transmission of HIV.

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Prevention of HIV transmission among MSM is failing worldwide with ongoing high seroconversion rates.<sup>12,13</sup> MSM suffer from stigma and discrimination, which is often systematised and sanctioned by country leaders. The overwhelming prevalence of HIV among heterosexual individuals has resulted in messaging that is heteronormative and has failed to address the risks associated with unprotected anal sex.

HIV risk reduction tools for MSM are limited or are ineffective.<sup>12</sup> Condoms are effective, but use remains inconsistent. Latex-compatible lubricants are required for anal sex with a condom, but are expensive and not widely available in Africa. Treatment of sexually transmitted infections (STIs) which cause mucosal disruption lowers HIV acquisition risk; however, STI incidence is increasing among MSM even in developed countries with good messaging and excellent health care infrastructures.<sup>14,15</sup>

Post-exposure prophylaxis (PEP) ART for MSM who may have been exposed to HIV is likely to be protective, although many structural barriers to access still exist. Proof of concept of the efficacy of pre-exposure prophylaxis (PrEP) comes from the iPrEx study in which long-term use of tenofovir and emtricitabine (Truvada) was associated with a 40% lower risk of seroconversion among MSM.<sup>16</sup> Many issues relating to the implementation of PrEP remain, including concerns of increasing risky behaviours. PrEP remains unavailable to most African MSM.

Vaginal use of tenofovir-based gel can reduce a woman's chance of becoming HIV infected by 39%;<sup>17</sup> similar results have not been established for rectal microbicides, and more development work is needed to make this intervention applicable for MSM.

Male circumcision (MC) has become an important prevention tool for heterosexual men,<sup>18</sup> but cannot protect men who acquire HIV infection anally. MC may provide some protection for MSM who practise exclusively penetrative anal sex.<sup>19,21</sup> High levels of bisexual concurrency have been noted among some African MSM, who might benefit from MC to reduce their risk of vaginal acquisition of HIV.<sup>19</sup> There are no current recommendations to offer MC to MSM as a risk reduction strategy.

Preliminary reports from the HPTN 052 study showed that early ART initiation among HIV-discordant couples was associated with a 96% reduction in HIV seroconversion.<sup>22</sup> Although the participants in this study were predominantly heterosexual couples, it is plausible that this benefit will hold true for MSM. Considering the poor efficacy or availability of HIV risk-reduction interventions for MSM, early treatment with ART to lower viral load and thus infectivity of MSM is an immediately available and implementable intervention.<sup>4</sup>

State-supported MSM-targeted health services already exist in South Africa, namely the Ivan Toms (Cape Town) and Simon Nkoli (Soweto) Centres for Men's Health, which are able to attract African MSM into sexual health and HIV care. These clinics previously missed the opportunity to initiate their clients on early treatment to improve individual outcomes and, importantly, begin to address high HIV transmission rates among these men. The revised SAG guidelines will allow these concerns to be addressed.

## Conclusion

The positive benefits of early ART initiation for HIV-positive MSM are clear. This strategy conforms to evidence-based ART initiation guidelines, which ideally should be implemented for the population at large when funding and resources allow, but urgently for MSM and other high-risk communities.

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