Towards an Integration of PrEP into a Safe Sex Ethics Framework for Men Who Have Sex with Men

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The ethics of safe sex in the gay community has, for many years, been focused on debates surrounding the responsibility (or lack thereof) regarding the use of condoms to prevent HIV transmission, once the only tool available. With the development of Truvada as a pre-exposure prophylaxis (PrEP) for HIV, for the first time in the history of the HIV/AIDS epidemic there is the potential to significantly reduce the risk of HIV transmission during sex *without* the use of condoms (without taking into consideration 'treatment as prevention' with HIV-positive people). The introduction of PrEP necessitates a renewed discussion about the politics and ethics of safe sex for men who have sex with men (MSM). We present the arguments of authors who hold radically opposite positions with regard to the ethics of condom use by gay men, but who currently both criticize the use of PrEP. We offer a critique of their arguments and advance the position that the use of PrEP, even without condoms, can be acceptable and part of a safe sex ethics framework for MSM.

Introduction

The publication of the iPrEx study in 2010 marked an important scientific breakthrough, demonstrating that the daily use of the antiretroviral drug Truvada[®] by HIV-negative individuals was highly effective as a pre-exposure prophylaxis (PrEP) for HIV (Grant *et al.*, 2010), decreasing the risk of HIV transmission by more than 92 per cent when adherence is high (Centers for Disease Control and Prevention (CDC), 2014).¹ Since the iPrEx study, more trials on PrEP have been taking place, such as the PROUD study in the UK (McCormack *et al.*, 2016) and the IPERGAY trial in France and Canada (Molina *et al.*, 2015). The US Food and Drug Administration first officially approved Truvada as PrEP in July 2012 and since then additional countries, including Canada and France in 2016, have begun approving this antiretroviral drug for use as PrEP. In the first quarter of 2017, there were an estimated 136,000 users of PrEP in the US. However, the Centers for Disease Control and Prevention estimates that 1.2 million adults in the USA should be adhering to PrEP, since they are at high risk for HIV

infection (Smith *et al.*, 2015). Men who have sex with men (MSM) with different partners and who do not always use condoms are one group for whom there is a clear indication for PrEP. In principle, PrEP would also be effective in the context of heterosexual transmission, but for the purposes of our analysis, we will restrict our focus to its use by MSM.

Condoms used to be the only tool to prevent HIV infection through sex and came to symbolize the cornerstone of a 'safe sex ethics'. As described by Halperin (2007: 18), the promotion of 'safe sex' at its origin is a gay grassroots initiative with the goal of stopping the transmission of HIV by encouraging condom use. The framework of safe sex ethics embodies and promotes specific ethical values while being rooted in the goal of preventing HIV transmission. The main ethical principles at the core of this framework are respect for autonomy and justice. Respect for individuals' autonomy entails respect for their preferences in relation to sexual practices and the consideration of such preferences in the ethical analysis of public health interventions. Justice requires the exceptional scrutiny of public health interventions that may marginalize or exacerbate the

marginalization of specific populations, especially of groups that tend to be stigmatized and/or vulnerable, such as sexual minorities. These classical ethical principles are thus employed within a public health logic that strives for risk reduction. Thus, rather than public health approaches that aim to stop populations from engaging in sex (especially socially marginalized groups like MSM), a safe sex ethics framework advocates for people to have unrestricted access to the necessary knowledge and tools so that they can protect themselves and their partners from HIV when they engage in sexual practices.

Nonetheless, throughout the years, the use of condoms became a highly controversial subject within the gay community. Some, like French AIDS activist Didier Lestrade from ACT UP-Paris, advocated for obligatory use in all sexual relations, grounded in principles of individual responsibility toward others, do no harm (non-maleficence) and community solidarity in fighting the HIV/AIDS epidemic (Girard, 2013, 2016). Others, however, argued for an acceptance of some risks as part of respect for individual autonomy and freedom to resist the imposition of public health measures that sought to control behavior and contributed to a medicalization of intimate relationships (Dean, 2009). Hence, a degree of polarization emerged, where some scholars and activists vehemently opposed ‘bareback sex’ (sex without condoms between men), while others embraced it. Condom use by MSM was once described by epidemiologists as one of ‘the most profound modifications of personal health-related behaviors ever recorded’ (Halperin, 2007: 18 referencing Stall *et al.*, 1988), but their use by MSM has declined noticeably in the past decade, a trend that has been associated with a global rise in new incidents of HIV for this group (Piot *et al.*, 2015: 178; Beyrer *et al.*, 2016). With the availability of PrEP as a new biomedical tool to prevent HIV transmission, it is important to explore its place and role within a safe sex ethics framework for MSM.

To study this question, we present and criticize the arguments of two leading authors in this field—Hervé Latapie and Tim Dean—who hold radically opposed views with regard to an ethics of safe sex grounded in condom use in the gay community, but who have recently both been very critical of PrEP. Both authors, in particular Latapie, present arguments against PrEP that are receiving attention online and in the media, potentially influencing public opinion and behavioral trends (Caulfield *et al.*, 2007; Mackenzie *et al.*, 2008; Rachul and Caulfield, 2015). For example, Latapie was interviewed in *France Culture* (Kieffer and Marette, 2018) and other authors who share similar opinions on PrEP have been vocal in

the media, such as Carter (2018) in *The Guardian*. But since these arguments lack empirical basis, they may cause harm and thus need to be addressed and criticized. In this article, we promote the position that the proper use of PrEP, even without condoms, can be integrated into a safe sex ethics framework, since this tool can effectively prevent the transmission of HIV. More specifically, our reasoning is rooted in a risk reduction approach that is supported by the public health literature.

MSM who do not use condoms have been extensively stigmatized, especially from a public health and medical perspective (Halperin 2007; Dean, 2009; Brisson, 2017b). This stigma resulted in a reluctance to disclose information to health-care professionals and consequently in barriers to accessing adequate health care (i.e. HIV testing and treatment if needed). The use of PrEP has also been stigmatized, by both health-care professionals and the gay community itself, as illustrated by the popular expression ‘Truvada whore’ (Calabrese and Underhill, 2015; Haire, 2015; Pawson and Grov, 2018; Thomann *et al.*, 2018). By contrast, the World Health Organization (2015: 42) recommends that PrEP be made available for people at risk of HIV, and highlights the fact that barriers in access to this prevention tool, whether economic or societal, are an important ethical issue. Brisson (2017a) has thus argued that it is ethically permissible for individuals to use informal ways to access PrEP (‘wild PrEP’)—such as Internet-facilitated sharing—in countries where PrEP is unavailable or may be prohibitively expensive (e.g. a bottle of 30 tablets of Truvada can cost approximately \$US900). In arguing that the use of PrEP is compatible with safe sex ethics, we are also advocating for the de-stigmatization of current and potential users of PrEP while simultaneously promoting educational awareness of this new HIV prophylactic tool. Individuals who use PrEP or want to use PrEP should be able to do so, free from any form of moral judgment.

The Critiques of PrEP from Both Extremes

Latapie: A Preoccupation with Sexually Transmitted Infections

One of France’s most popular and vocal critics of PrEP has been Hervé Latapie. An activist in the gay community, Latapie, is renowned for having been for decades a fervent advocate for strict condom use by gay men and for strongly condemning men who engage in bareback sex. More recently, Latapie has been very critical toward

PrEP and its users, often employing moralizing language, such as suggesting that users of PrEP obtain their sexual pleasure through a dependence relationship with the pharmaceutical industry (Latapie, 2017d). In reading Latapie's different articles and blog entries on PrEP (2015, 2016, 2017a,b,c,d,e,f), it becomes evident that he is ardently opposed to this new HIV prevention tool. For example, Latapie argues that MSM should avoid this 'chemical compensation' that is PrEP and instead find more satisfying ways of sexual fulfillment by using condoms (Latapie, 2018). One of Latapie's main preoccupations is the association between the introduction of PrEP and a reduction in condom use by members of the gay community. He argues—but without providing scientific references—that every period of human history where sexuality was liberated was followed by increased rates of sexually transmitted infections (STIs), so he is particularly concerned that a normalization of PrEP will inevitably lead to an increased incidence of syphilis, gonorrhea, chlamydia and other STIs (Latapie, 2017e). For Latapie, the only acceptable form of safe sex by MSM is the use of condoms, not PrEP. While this argument may sound logical, it presents an incomplete picture of the situation, particularly from a public health perspective.

First, it is important to distinguish between 'efficacy' and 'effectiveness' in the achievement of specific public health goals. While condoms are efficacious at preventing HIV transmission, their use by MSM is unpopular for many reasons, resulting in reduced effectiveness in lowering new rates of HIV. Similarly, abstinence is efficacious because it completely prevents the transmission of HIV and other STIs, but, as has been repeatedly demonstrated internationally and over decades of the HIV/AIDS epidemic, the promotion of abstinence-only public health messages is largely ineffective (Underhill *et al.*, 2007; Kirby, 2008; Kohler *et al.*, 2008; Buse *et al.*, 2016; Lo *et al.*, 2016), and threatens 'fundamental human rights to health, information, and life' (Santelli *et al.*, 2006: 72). From the perspective of public health and public policy, it is unethical to invest in initiatives that simply do not work and that may have negative consequences, such as increasing at-risk behavior because of a lack of education or lack of access to other risk reduction strategies and tools.

Second, it is necessary to establish ethically justifiable public health priorities. While STIs such as gonorrhea and chlamydia are serious public health problems, they are nonetheless curable and do not involve the same severe complications and risks as HIV. If a biomedical tool such as PrEP can significantly decrease HIV transmission rates, but results in increased rates of other STIs

(although this may not in fact be the case, as will be shown below), then a weighing of the risks and benefits can lead to the conclusion that it is ethically defensible to prioritize HIV prevention over the prevention of curable STIs.

Third, gonorrhea, syphilis, hepatitis C, hepatitis B and chlamydia, among other infections, can be transmitted sexually through saliva or oral sores, and hence through oral sex (Lafferty *et al.*, 1997; Edwards and Carne 1998a,b; Barbee *et al.*, 2016) or when saliva is used as a lubricant for anal sex (Jin *et al.*, 2007; Chow *et al.*, 2016). More recently, studies have shown that gonorrhea can also be transmitted through kissing via saliva (Priest *et al.*, 2017: A203), a practice that previously used to be framed as 'safe'. Chow and colleagues found that 'saliva use as a lubricant for anal sex is a common sexual practice in MSM, and it may play an important role in gonorrhoea transmission. Almost half of rectal gonorrhoea cases may be eliminated if MSM stopped using partner's saliva for anal sex' (Chow *et al.*, 2016: 532). However, findings from another study suggest that 'MSM are unlikely to stop saliva transmitting sexual practices they enjoy and consider low risk' (Walker *et al.*, 2016: 2), including kissing and using of saliva for lubrication (Chow *et al.*, 2017: A5). Fairley and colleagues (2017) argue that condoms are not a useful tool for preventing gonorrhea among MSM 'because, unlike heterosexuals, the penis is not responsible for most gonorrhea transmission' and 'the screening that is advocated annually for MSM would need to be much more frequent to reduce the disease reproductive rate' (Fairley *et al.*, 2017: 103). A focus on condoms as primary prevention of STIs therefore misses the fact that other sexual behaviors can increase the risk of transmission. Since condoms are rarely if ever used by MSM for oral sex, the argument that PrEP will lead to increased rates of STIs due to a reduction in condom use is misleading. Even if condoms were constantly used for anal sex, STIs could still be easily transmitted through oral sex, anal lubrication and even kissing.

Fourth, Latapie (2017e) attributes the 'very high rates' of STIs in the gay community (specifically in Paris) to the introduction of PrEP. Yet, there are different ways of interpreting very high rates of STIs within a community and not all are problematic from a public health perspective. For rates of infections to be recorded, people need to see a health-care professional, be diagnosed and then treated if infected. A rise in incidence of STIs in correlation with the introduction of PrEP could simply be a case of detection bias: individuals at high risk but who previously were not (frequently) tested for STIs, inquired about PrEP and then got tested. It is also

important to note that STIs can be asymptomatic. From a public health perspective, this presents an enormous challenge, since asymptomatic individuals who engage in high-risk sexual behavior with multiple partners might not be aware that they have an STI, and consequently not take appropriate precautions.

Fifth, an additional interrelated point regarding an association between ‘very high rates’ of STIs and PrEP is epidemiological in nature. If a man with an STI gets tested only once a year, this will be statistically recorded as one case of STI that year, even though he might have had the STI for many months and transmitted it to others (regardless of whether he always used condoms). Yet, if a man on PrEP gets tested for STIs every 3 months (as it is recommended by the CDC) and tests positive for an STI every time, this will be recorded as four incidents in 1 year. And since a person taking PrEP is most probably a person who engages in higher-risk sexual behavior and likely with multiple partners, it may not be surprising that these individuals often contract STIs. An individual who engages in high-risk sexual behavior who then gets more frequent testing for STIs would thus contribute to a recording of higher incidence of STIs. This, however, should not be framed as a negative consequence of the introduction of PrEP.

So PrEP use may not actually contribute to an increase in STIs rates, but on the contrary, may actually help in their reduction. The CDC (2014) recommends that all PrEP users consult their doctor every 3 months to be tested not only for HIV but also for other STIs. Such stringent surveillance will ensure that were a PrEP user to contract an STI (including HIV), they would be treated immediately, thus preventing further spread of the STI. Public health surveillance measures of this sort can thus help individuals on PrEP and who engage in high-risk sexual behaviors to receive treatment in a timely fashion. However, without PrEP in the equation, it would likely be challenging to convince individuals who engage in high-risk behaviors (and their health professionals) to be regularly tested for HIV and STIs and then receive treatment if needed.

Problems with the effectiveness of promoting condom use, however, do not mean that such messaging should be abandoned (as should be the case for the promotion of abstinence-only prevention). For example, a 2011 epidemiological study in France found that 55 per cent ($n = 2,603$) of HIV-negative MSM constantly used condoms for anal sex and 8.3 per cent ($n = 393$) did not have anal sex, whereas the remaining fraction used condoms to varying degrees, some more frequently than others (Velter *et al.*, 2015: 5). These statistics make it clear that condoms still play a central part in the sexual

practices of many MSM. We *very strongly* and *ardently* advocate for the promotion of condoms as a crucially important public health intervention, as do the CDC guidelines which indicate that PrEP should be used with condoms (CDC, 2014). But, as statistics have shown with the globally increasing rates of HIV for MSM, condoms are being used for various reasons less frequently by this group. Even though condoms are efficacious, they are not totally effective at preventing the transmission of STIs among MSM (e.g. resistance to their use, oral sex and kissing), which is why we argue that PrEP should be integrated within a safe sex ethics framework for MSM as a means to prevent HIV transmission at a population level.

Dean: Preoccupation with Biopolitical Resistance with PrEP

While Latapie’s arguments against PrEP seem to ignore the very high surveillance that would help decrease transmission rates of HIV and STIs in the MSM population, the issue of surveillance is precisely the focus of Dean’s (2015: 232) critique against PrEP: ‘Given that Truvada for PrEP comes with a requirement for frequent blood testing, how might we assess the entailments of having gay men’s bodies so closely monitored by medical authorities?’. Dean is one of the most important and controversial authors on the question of bareback sex. While barebacking and the men who engage in the practice have traditionally been highly problematized, particularly from a public health perspective (Brisson, 2017b), Dean in his book, *Unlimited Intimacy: Reflections on the Subculture of Bareback Sex* (2009), raises a different perspective. Using a Foucauldian approach, he espouses barebacking as a sexual practice that allows men to embrace and even valorize transgression by challenging and resisting public health norms (i.e. defying the ethics of condom use for gay men).

While one might assume that Dean would be indifferent to or in favor of PrEP as a means of enabling safer condomless sex, this is not the case. Dean criticizes PrEP, since it does not allow for biopolitical resistance; ‘adopting Truvada risks defeating the purpose of bareback as a practice of resistance to mainstream health norms’ (Dean, 2015: 233). While Dean’s arguments are coherent with his baseline assumptions and his theoretical stance rooted in resistance and liberty, they align neither with a scientific and a clinical rationale nor with public health objectives. Deliberately refusing preventative measures in the face of potential life-threatening

infection is arguably unethical. By analogy, individuals are allowed to start smoking upon seeing an anti-smoking advertisement if they want to resist a public health imperative, but such behavior would be irrational for an individual from a medical point of view and constitute a public health danger given the effects of second-hand smoke. Public health initiatives aimed at reducing smoking or the risks associated with certain sexual practices can thus be justified as means to promote both individual and communal benefits, despite the fact that such initiatives may be interpreted by some as an attempt to control their bodies. This ethical tension is not unique to the case of PrEP and the gay community and can be found in numerous discussions regarding the ethics of public health communication, for example, with obesity or infertility prevention efforts (Puhl and Heuer, 2010; Lemoine and Ravitsky, 2013).

It is worth noting that Dean is not advocating that gay men should not use PrEP, but he argues ‘that there exist biopolitical side-effects (in addition to physiological ones) to mass compliance with pharmaceutical mandates’ (Dean, 2015: 234). Dean adds to his argument the idea that with PrEP, medical and scientific authorities can now monitor gay men in new ways by measuring the concentration of Truvada in the blood of PrEP users. Put differently, ‘sexual surveillance now can bypass subjectivity altogether by going directly inside the body to elicit information. In this way, the new technologies make visible a chasm between what gay men are willing to tell medical or scientific authorities and what they are actually doing in their everyday lives’ (p. 231). It is important to recognize that the CDC (2014) does not recommend that doctors screen for Truvada adherence by PrEP users. Yet, we argue that even if doctors were encouraged to verify the concentration of antiretroviral drugs—e.g. in cases of seroconversion—this does not provide a strong ethical argument to discourage the use of PrEP.

As mentioned briefly at the start, a bottle of Truvada has a market price of \$US900 without insurance, and only a handful of countries approved Truvada as PrEP. In an interesting act of biopolitical resistance, of which Dean might approve, there is an emerging global phenomenon of informal PrEP, also known colloquially as ‘wild PrEP’. MSM around the world are developing unofficial ways to access tenofovir and emtricitabine, the molecules that compose Truvada. For example, they may ask friends who have ‘legitimate’ and thus insured and affordable access to Truvada (e.g. private health insurance) to procure the drug, and then share it with other MSM, locally or through the Internet. They may also go to emergency rooms asking for a post-exposure

prophylaxis treatment pretending to have been exposed to HIV to then use part of the limited antiretroviral tablets prescribed to be used afterward as PrEP (Brisson, 2017a). Might these acts of resistance to medical norms of appropriate use not be a means of legitimizing PrEP use, for those activists who believe as does Dean?

Side effects of Truvada as PrEP have been raised as a potential negative consequence of its use, such as previously mentioned by Dean. It is important to note that Truvada is not a completely ‘new’ drug, and it has been used as part of HIV treatment for HIV-positive people since 2004. Yet, as explained by the CDC, side effects of Truvada as PrEP in clinical trials ‘were uncommon and usually resolved within the first month of taking PrEP (“start-up syndrome”)’ (CDC, 2014: 38). Side effects are relatively mild, ranging from headache and nausea. More serious side effects are decline in bone mineral density for a small percentage of participants (Liu *et al.*, 2011) and small but statistically significant changes in renal function for few participants (Solomon *et al.*, 2014). This is why the CDC (2014: 38) recommends health-care providers to do follow-ups on renal functions every 6 months and recommends cessation of Truvada as PrEP based upon the test results.² Yet, this raises an important public health ethics question: Should individuals at substantial risk of HIV be using Truvada as part of prevention and experience its potential negative side effects or instead run the risk of becoming HIV-positive and possibly have to take Truvada (or other antiretroviral drugs) as part of HIV treatment for the rest of their lives? In evaluating the risks and benefits for individuals at high risk for HIV, we argue that it is much better to run the risk of experiencing side effects of using an antiretroviral drug for prevention than to contract HIV and also run the risk of having side effects from antiretroviral treatment. Further, as shown by Koester and colleagues (2017), male PrEP users described a sense of security and relief in HIV-related stress reduction that did not automatically lead to bareback sex, i.e. a psychological positive ‘side effects’ of PrEP that might counterbalance the potential negative physiological side effects.

Conclusion

In comparing Latapie and Dean, there are clearly some radical differences. Latapie is vigorously opposed to bareback sex, while Dean embraces the sexual practice; yet they both criticize PrEP. In one of his blog entries, Latapie (2015) argues that he has the right to refuse to

take PrEP. Ironically, Dean argues the exact same thing but for different reasons. While no one is arguing in favor of coercing MSM to use PrEP, Latapie does advocate pressuring gay men to use condoms and not PrEP, leading us to ask: Should MSM not be entitled to refuse to use condoms and rather adopt PrEP as a safe sex practice? We argue that they should have this choice. There is intrinsic value in allowing individuals to choose the means (technological or others) they find most suitable for themselves. The refusal or withholding of access to a proven and effective intervention is arguably unethical, even if understandable due to economic considerations.

The introduction of new biomedical interventions often leads to a reconfiguration of social relations and codes of ethics. Individuals are entitled to develop and share their opinions regarding novel technologies and can advocate in their community for their rejection or adoption. However, when such advocacy contradicts scientific evidence and leads to behaviors or policies that put the health of individuals at risk or create public health threats, such opinions should be discredited and exposed as dangerous. One example is the catastrophic public health disaster in South Africa—the leading country in HIV/AIDS rates—when it had an AIDS-denialist president. The public health dangers of rejecting scientific evidence are clearly not restricted to HIV/AIDS; the anti-vaccination movement or global climate change deniers who are in positions of political power can and must be subject to the strongest critique, grounded in arguments that respect individual liberty and also align with principles of solidarity and promotion of public health and the common good. We thus disagree with Latapie and Dean on grounds of evidence present in the public health literature as well as related ethical principles.

When used correctly, PrEP is effective at preventing HIV and as such is a technology with a great potential to help lead to an AIDS-free generation. This is why the Joint United Nations Program on HIV/AIDS (UNAIDS), in its 2016–2020 Strategy to fast track the end of the AIDS epidemic by 2030, advocates for measures to ‘inform and create demand for use of traditional and new prevention technologies, including condoms and pre-exposure prophylaxis’ (UNAIDS, 2015: 10). The proper use of PrEP necessarily involves very regular monitoring for STIs and HIV in individuals who engage in high-risk sexual behavior, something that would not be achievable in contexts where PrEP is not available. This high surveillance through testing and rapid treatment is key to reducing new rates of STIs and HIV globally. As such, we argue that the use of PrEP, even

without condoms, should constitute part of safe sex ethics framework for MSM. This argument is based on the public health benefit of reducing the incidence of STIs and HIV, as well as of the principle of justice which requires us to ensure access to care to vulnerable populations, in this case to individuals who would not receive the same care without the presence of PrEP.

It is important to note that clinical studies on PrEP and MSM largely took place in North America and Europe. It is possible that in other contexts PrEP may not be an effective public health measure for MSM (e.g. difficulty with adherence, challenges with frequent STI testing), thus potentially making it unethical to promote as a sole intervention. Further research is therefore needed on PrEP use by MSM in other settings (e.g. in low- and middle-income countries) to tailor public health recommendations on PrEP to local sociocultural contexts and other lived experiences of certain vulnerable groups (e.g. adolescent and young MSM in Latin America and the Caribbean). However, while there might be a lack of evidence-based research on PrEP’s efficacy in MSM in other national contexts, a recent research with MSM in West-Africa (Mali, Ivory Coast, Burkina Faso and Togo) demonstrated a very high interest in taking PrEP, particularly for those at high risk of HIV infection (Coulaud *et al.*, 2018). As such, we agree with the researchers who argue that the implementation of PrEP should be considered urgently as part of a prevention package for populations that want and would benefit from PrEP like Western African MSM.

While this article has focused on the ethical acceptability of PrEP even without the use of condoms, we strongly stress that condoms are and should be seen as a fundamental part of safe sex ethics and so be actively promoted in a public health context. Yet, the incorporation of PrEP into this approach cannot be neglected, given the demonstrated limits of condom use (ineffectiveness due to resistance to their use, but also limits in preventing some STIs). The promotion of updated knowledge around HIV and STI prevention is essential, especially for health-care professionals and other public health actors, so they can provide guidance for their patients (and the broader public) about the benefit of various means of safe sex, including the use of PrEP. The use of condoms as a cornerstone of safe sex ethics was one of the most profound public health successes in the HIV/AIDS epidemic, acknowledging that an effective public health approach must strike a balance between risk reduction and the value of pleasure in sex. We must now approach PrEP in the same way. Once again, we must promote open discussions about sex and

sexuality and find the optimal was of incorporating the different tools available into a framework of safe sex ethics.

Notes

1. The third case of seroconversion on PrEP with multidrug resistant HIV was reported in March 2018, over 5 years and a half after Truvada was approved as PrEP in July 2012 in the USA (Thaden *et al.*, 2018). This number demonstrates how PrEP is much more efficient in real-life setting than in clinical trials.
2. Potential users of PrEP have argued that the side effects of Truvada as PrEP justify rejecting it as an HIV prevention tool. For this reason, the DISCOVER clinical trial is currently assessing whether the antiretroviral drug Descovy[®] can also work as PrEP, but with less side effects.

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