Published in final edited form as:
Cult Health Sex. 2021 December ; 23(12): 1641–1655. doi:10.1080/13691058.2020.1790039.

Moral practices shaping HIV disclosure among young gay and bisexual men living with HIV in the context of biomedical advance

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Abstract

Biomedical advances in diagnostics, treatment and prevention increase the means available to reduce HIV transmission risk. Subsequent shifts in HIV status disclosure obligation and ethics may impact how those living with HIV view, enact and experience disclosure. We analysed focus group and interview data to explore how these changes are reflected in disclosure decision-making to sexual partners among young gay and bisexual men living with HIV in the USA. Three interrelated themes were identified: engaging with partners' varying HIV knowledge; attribution of blame; and negotiating disclosure-related harms. Participants experienced blame from partners that questioned the timing of HIV testing, status disclosure and sex events without regards for viral suppression or use of pre-exposure prophylaxis. Substantial HIV stigma was described in response to disclosure, mitigated in some cases by partners' higher HIV knowledge. Overall, an uneven diffusion of HIV treatment and prevention knowledge and continuing HIV stigma seemed to limit the translation of biomedical advances into improved disclosure experiences. Our findings suggest that young gay and bisexual men living with HIV may continue to perform much of the moral labour involved in disclosure by managing others' reactions, correcting inaccurate sexual health information, and negotiating the risks of disclosure-related harm.

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Declaration of Interest
We declare no conflicts of interest.

Keywords

disclosure; HIV prevention; gay and bisexual men; HIV-related stigma

Introduction

Disclosing an HIV-positive serostatus to a sexual partner can reduce HIV transmission risk by informing HIV testing, sexual behaviour and preventive measures (Chaudoir, Fisher and Simoni 2011). In the USA, these decisions may be particularly influential among gay and bisexual men who accounted for 70% of all new HIV diagnoses in 2018 with disproportionate impact on those who are Black and those aged 13 to 34 years (United States Centers for Disease Control and Prevention 2018). HIV serostatus disclosure is also associated with benefits for the discloser, including increased social support and adherence to antiretroviral therapy (ART) (Stirratt et al. 2006; Smith, Rossetto and Peterson 2008; O’Connell, Reed and Serovich 2015). Yet, following disclosure, entrenched stigma may also prompt HIV-related discrimination, retaliation, legal action and loss of social support (Chaudoir and Fisher 2010; Frost 2016).

In the USA, 55% to 72% of gay and bisexual men living with HIV report having disclosed their serostatus to a sexual partner (Przybyla et al. 2013; Medina et al. 2019; Serovich, Laschober et al. 2018). Disclosure varies across relationships (e.g. casual vs. stable partners) (Przybyla et al. 2013) and sexual acts (e.g. insertive vs receptive anal intercourse) (Serovich, Reed et al. 2018). The widespread use of social and sexual networking platforms has also changed when and how gay and bisexual men share their HIV status, with some disclosing on these platforms prior to meeting in person (Medina et al. 2019).

In US clinical and public health spheres, the overriding ethical mandate has been that people living with HIV have a moral obligation to disclose their HIV serostatus to partners prior to an act where sexual transmission may occur (O’Leary and Wolitski 2009; Dixon-Mueller 2007). However, the lived experience of disclosure is more complex than an ‘obligatory’ act. Disclosure decisions are influenced by personal and interpersonal moral considerations, self-regard and beliefs about the impacts of disclosure. HIV stigma and privacy concerns may inhibit disclosure, even as self-efficacy and perceptions of honesty and responsibility to protect others may enable disclosure (Rutledge 2009; Cao et al. 2019; Flowers and Davis 2013).

We argue that technologies such as testing, treatment and pre-exposure prophylaxis (PrEP) have changed the moral practices underlying HIV disclosure to sexual partners. Yet, the evolution of clinical and public health disclosure directives is rarely examined alongside the diffusion of biomedical HIV prevention and treatment technologies. We first briefly describe the evolving meaning and ethics of serostatus disclosure through the early epidemic (pre-1985), HIV testing and status awareness (1985 – 1996), highly-active combination antiretroviral therapy (HAART) (1996), and the Treatment as Prevention (TasP) and post-TasP era (2011 – present) (Table 1). We then use data from the development of an HIV status disclosure intervention (Muessig et al. 2018) to explore how young gay and bisexual men living with HIV experience disclosure to sexual partners in the context of current HIV prevention and treatment technologies.

Early in the epidemic, disclosure was a non-issue (Flowers 2001). Without testing and effective treatment, individuals could not know their serostatus, and morbidity and mortality were high. Prevention of HIV acquisition was viewed as a community-wide responsibility where the safest approach was to assume that all potential partners were HIV-positive (Flowers, Duncan and Frankis 2000).

HIV antibody testing (1985) allowed individuals to learn their serostatus, though no effective treatment existed and morbidity and mortality remained high (Flowers 2001). The perceived onus for HIV prevention among gay communities shifted from a communitarian approach to one where individual people living with HIV were primarily responsible for preventing onward transmission via knowing and disclosing their serostatus and through use of barrier protections (i.e. condoms) (Bayer 1996; Flowers, Duncan and Frankis 2000). During this era, many US states codified laws such as those criminalising knowing attempts to transmit HIV (Frost 2016).

The 1996 advent of HAART regimens and approval of viral load testing (United States Food and Drug Administration 2018a) significantly changed disclosure discourse. On HAART, people living with HIV could suppress the virus and achieve a clinically ‘undetectable’ status, (World Health Organization 2019). As HAART greatly improved patients’ health and lifespan, people living with HIV faced new disclosure decisions, including timing of disclosure in relation to HAART side effects, having their serostatus revealed due to taking HAART and managing others’ negative perceptions of HAART (Klitzman et al. 2004). Public health and bioethics literature on the ethics of disclosure to sexual partners even up until 2009 placed the responsibility for disclosure on people living with HIV, despite growing scientific evidence that individuals with viral suppression could not transmit HIV (Vernazza et al. 2008). These discourses were often framed using ethics and morality (O’Leary and Wolitski 2009) and the shared responsibility of preventing HIV rendered the actions of people living with HIV who did not disclose ‘profoundly unethical’ (Dixon-Mueller 2007, 286). However, literature from this period is silent on the disclosure responsibilities of HIV-negative and status unknown individuals (Dixon-Mueller 2007, O’Leary and Wolitski 2009).

Perceptions of viral suppression have shaped HIV sexual transmission risk management in gay communities since the 2000s, prior to scientific consensus around undetectable status and untransmissibility (Flowers 2001; Race 2001; Davis 2008). During sexual decision-making, men reported taking into account a partners’ serostatus (through seroadaptive behaviours like serosorting and seropositioning), and beliefs about HIV transmissibility with an undetectable viral load (Davis 2008). Viral load testing and the possibility of achieving and maintaining ‘undetectable’ status (although the protective nature of viral suppression had not yet been definitively proven), increasingly transferred the responsibility for preventing HIV sexual transmission toward people living with HIV (Race 2001).

In 2011, the HIV Prevention Trials Network (HPTN) 052 study found that early ART initiation reduced transmission risk among serodiscordant heterosexual couples by 96% (Cohen et al. 2011, 2016), prompting global recommendations for ART initiation upon diagnosis (President's Emergency Plan for AIDS Response 2012). This advance maintained the responsibility of HIV prevention with people living with HIV by emphasising early ART initiation and adherence (Persson 2013; Young, Flowers and McDaid 2016). In 2012, tenofovir/FTC (Truvada) was introduced as the first approved pre-exposure prophylaxis (PrEP) (United States Food and Drug Administration 2018b). PrEP extended individual agency to prevent HIV to all partners – thereby making prevention independent of one's HIV status, known or unknown. However, the impact of PrEP on status disclosure has been mixed: increasing willingness to discuss HIV status, providing the security to forgo a disclosure conversation, but also exposing gay, and bisexual men to stigmatising reactions (Mutchler et al. 2015; Grace et al. 2018).

Together, these biomedical advances have impacted the ability to know one's HIV status, change HIV-related risk and make decisions around disclosure to sexual partners. These changes have implications for the ethics of HIV status disclosure ranging from changes in disclosure-related laws such as the decriminalisation of non-disclosure to sexual partners in many states (The Center for HIV Law and Policy 2017) to sexual risk reduction intervention messaging. Our analysis examines how these changes are reflected and enacted in disclosure perspectives, practices and experiences among a sample of gay and bisexual men living with HIV.

Materials and Methods

Data Collection

Tough Talks is a disclosure decision-making intervention for young gay and bisexual men living with HIV. As part of the intervention, participants interact with a virtual character (via a smartphone or iPad) to experience and practise HIV status disclosure conversations with sexual partners in different virtual dating and relational scenarios. The intervention development process is described elsewhere (Muessig et al. 2018).

Data were collected in four cities in North Carolina, USA, between 2014 and 2016 - after the initial results of HPTN-052 but before the widespread use of PrEP and before the 'Undetectable = Untransmissible' (U=U) movement (United States Centers for Disease Control and Prevention 2017b). Data in the parent study were collected in three phases: intervention development with focus groups (Phase 1), usability testing and in-depth interviews (Phase 2), and pilot testing and in-depth interviews (Phase 3). Phase 1 data collection focussed on disclosure experiences including strategies, challenges and facilitators. Phases 2 and 3 evaluated user experience of the intervention in comparison to lived disclosure experiences. Focus groups and in-depth interviews were conducted by study team members (KM, KS, KK) trained in qualitative research methods and conducting research with LGBTQ populations and people living with HIV.

Participants completed a brief survey covering sociodemographics (e.g. age, race/ethnicity, education, income), HIV status disclosure (e.g. ever/recent disclosure to partner, self-efficacy), technology use, and HIV status (time since HIV diagnosis, result of last viral load). Four focus groups and 43 interviews were held in private locations at community-based organisations and study clinics. Sessions were recorded with participants' permission and transcribed verbatim by study staff and Verbalink©.

Eligible participants in the parent study were: age 18 to 29, assigned male sex at birth and currently identify as male, report any anal sex with a male in the past 12 months, and self-report being HIV-positive. (Muessig et al. 2018).

Data Analysis

Data analysis followed an inductive approach (Charmaz 2006) that prioritised participants' disclosure experiences and perspectives. Data reduction (Namey et al. 2008) was first used to exclude transcripts with no mention of key terms (e.g. 'viral load', 'medicine', 'test', 'ART', 'PrEP') in the context of partnerships and/or disclosure. The resultant dataset included two focus groups and 18 interviews. WD used line-by-line coding to identify quotes and themes that described dimensions of disclosure to sexual partners and biomedical approaches to prevention and treatment. WD wrote memos, produced matrices to describe and synthesise themes and examined theme interconnectedness. Codes, emergent themes, and data interpretation were finalized in consultation with co-authors (KM, LHW, AG, SR). All coding was conducted using Dedoose qualitative data analysis platform version 7.5.9 (Sociocultural Consultants LLC 2016). Themes are presented with illustrative verbatim quotes; participants chose or were assigned pseudonyms to protect confidentiality.

Ethical Approval

The study was approved by the Institutional Review Board at the University of North Carolina at Chapel Hill (IRB #14–0345).

Results

The dataset used in this analysis included 26 men between the ages of 20 and 29. Overall, 14 of 18 interviewees identified as gay (sexual orientation data were not collected for focus group participants), and 22 out of 26 participants were Black (Table 2). The most commonly discussed components of biomedical approaches to HIV treatment or prevention were HIV testing, having an undetectable viral load, and ART. Only one participant discussed PrEP concerning a sexual partner (Jason, age 22, Black, gay). Four participants described their viral load as being undetectable, including one who described himself as 'basically somewhat negative' (Paul, age 29, White, gay).

As the parent study's goal was to guide intervention development, the analysis focussed on describing and translating participants' disclosure experiences into intervention content, and intervention evaluation (Muessig et al. 2018). Themes from the parent study included: typical scenarios where disclosure occurs or does not occur, disclosure decision-making, challenges to disclosure, strategies used to disclose, and intervention feedback (Muessig et al. 2018). Major categories in the current analysis included: sexual and romantic relationship context affecting disclosure; disclosure-related burdens experienced by PLHIV; moral considerations; attributing blame; HIV knowledge; and stigma around sexuality, sexual practices and HIV status. We synthesised these categories into three themes: engaging with partners' varying levels of HIV knowledge, attribution of blame, and negotiating disclosure-related harms.

Bearing the responsibilities of disclosure: Managing knowledge of HIV biomedical advance

Participants identified the need to manage a range of reactions during initial disclosure conversations tied to their own and their partners' HIV knowledge level. Participants discussed educating potential sexual partners on a range of issues, for example, answering whether HIV could be transmitted through kissing and oral sex, addressing the perception of HIV as a 'death sentence', and counselling other PLHIV to initiate treatment. As Moulin (-age 23, Black) stated, '[Y]ou get educated questions you get dumb questions so it just depends on how you handle it'.

Participants connected their perceptions of high HIV knowledge among potential sexual partners to less stigmatising disclosure reactions, and some noted that they received more positive reactions during recent disclosure events compared to prior years. For example, potential sexual partners who were knowledgeable about HIV might respond by asking about participants' medications. Similarly, Michael (age 22, Black, gay) attributed others' willingness to engage in a relationship with him to both his own undetectable status, and others' knowledge of these results: 'But for me, I guess it's kind of different because I'm undetectable now, which I guess is what makes people more willing especially now that there's more people who understand [what] being undetectable is'. However, knowledge did not always translate into acceptance, as Michael had also experienced rejection: 'And he was like, "I do understand what undetectable is but that's just too much of a risk for me."'

In contrast, Paul (age 29, White, gay) attributed negative perceptions about HIV to lack of awareness of biomedical advance: 'You know, if someone was uneducated enough they just freak out because they probably heard the bad part of it [rather] than like the medical and today stuff…'. For some participants, such as Bobby (age 29, Black), acquiring HIV-related knowledge empowered them to disclose:

> When you know everything that's going on, when you know how to get you[r] CD4 count and how to get your viral load to where it needs to be, when you have the information about it, it's easier to share information with other people when you know it.

Not 'pointing fingers': Resisting attributions of blame

Unspoken rules for attributing blame for HIV transmission in relationship to biomedical advance centred on the timing of an individual's knowledge of their status in relation to when a possible sexual exposure occurred, though romantic and sexual relationship-related considerations influenced the extent of blame. For this reason, HIV testing was most frequently discussed during initial disclosure conversations.

Participants generally agreed that an individual who was aware they were living with HIV should disclose to a partner prior to having anal intercourse. Recent testing prior to a sexual encounter was equated with fulfilling one's responsibility for knowing one's status for some participants. As an additional tactic for resisting blame for potentially transmitting HIV, Daniel (age 29, Black, gay) invoked the clinical concept of the window period, referring to the approximately two weeks after infection when an individual may have already acquired HIV but might not test positive:

> ... A person try to throw the blame back on you…I'm not one to get angry at stuff like that, especially when I have documentation to support what I'm telling you. It's just one of those things where you address it. You let the person know, okay, I went to the clinic. I got tested right before we started talking. I went back since we've been talking and something came up positive. I think we should really go together and get tested. Not trying to point the fingers.

In contrast, when the other person had not been tested recently, participants perceived that the other person had not fulfilled their responsibility, and therefore could not attribute blame:

> ... I find out I have it. You don't even know when the last time you've gotten tested, but you feel like I've given it to you when in all [likelihood] you may have given it to me - So you can't put blame on really anyone unless you're for sure they knew beforehand…You can't really point fingers. (Sam, age 22, Black, bisexual)

Beyond attribution of blame in sexual relationships, some participants were aware of legal consequences of failing to disclose their serostatus to a sexual partner.[3] Curtis (age 28, Black, gay) characterised the responsibility to disclose as unambiguous in relation to these legal issues: '...You just have to tell them. I mean, by law, you have to tell them if you have sex with them...Like, it's no ifs, ands, buts about it, unless you're trying to do some jail time, and I'm not.'

Serostatus disclosure and discussions of HIV testing sometimes occurred alongside disclosure of sexual encounters outside of a primary relationship. Typically, the person who had outside partners was blamed for transmission. However, the timing of learning one's status and disclosing also seemed to influence this dynamic. For example, Jason (age 22, Black, gay) did not immediately disclose to his partner after testing positive:

> I found out before my ex found out, and he was the one who gave it to me. So I had to then tell him to go get tested…even though he was the one who cheated, but we won't point fingers. But he was kind of just like, 'Well, how come you didn't tell me? Dah, dah, dah, dah.'

The nature of the other outside sexual encounter also played a role. For example, Darrell (age 26, Black, gay) suspected he acquired HIV from being sexually assaulted during a break from his main partner experienced support rather than blame from that partner:

> …it was before I actually went in to get my results, we did have a talk and he did tell me that no matter what, he just wanted me to be honest with him. No matter what, just be honest. That's what I did. So I told him.

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[3] Data were collected prior to a January 2018 change in North Carolina's HIV criminalisation legislation, whereby those who have been virally suppressed for six months or more no longer needed to disclose their serostatus and could have condomless intercourse (The Center for HIV Law and Policy 2017).

Navigating disclosure and non-disclosure related harm

Participants navigated a range of post-disclosure issues that reflected moral considerations including what to do with (inaccurate) information about the other person’s status and sexual health, HIV-related stigma, and fear of secondary disclosure.

Participants perceived that many of those they disclosed to did not get tested or start treatment. Disclosure-related burden thus included assessing their own and others’ HIV/ sexually transmitted infection (STI) transmission and acquisition risks. Some participants such as Daniel (age 29, Black, gay) felt that others lied about their status, even after the participant had shared their status:

> I would come out and tell them, ‘Well, I’m positive. I want you to know.’ But it was, ‘Oh well. It’s okay. I’m negative so we’ll get through this.’ Then later you find out they’re positive too. So people do it all the time.

Additionally, participants recognised the risk of having sex with a partner without accurate information about the other person’s health. These risks included the other person having an undiagnosed STI, and not initiating HIV treatment:

> ...Or people that don’t feel like telling [their status] or they just go into this tangent where they just act like they don’t have it [HIV], and not taking medication and stuff. (Conrad, age 25, Black, gay)

Participants regularly experienced HIV stigma stemming from outdated perceptions of HIV. For example, one participant reported that others viewed his serostatus as a ‘death sentence’ despite major advances in treatment. Similarly, Chris (age 29, Black, bisexual) characterised ignorant attitudes towards HIV he encountered in the southeastern USA as ‘hav[ing] that AIDS mentality when it comes to the HIV virus down here.’ Participants also described fears about violentreactions to disclosure, as Conrad (age 25, Black, gay) stated, ‘It could go to them just wanting to kill you, just feeling that you shouldn’t exist’.

Participants also worried that disclosing their status meant giving up control of this personal information as they could not stop a partner from telling others. This potential was viewed by some as socially devastating. Robert (age 25, Black, bisexual) described the stigma he anticipated:

> We’re just told to just tell. Just tell him, but how can you tell someone that’s immature or how do you tell someone that is the type of person to put you around the town. I come from a small town…where if they get that out, oh, it’s the worst thing ever.

Other participants described the impact secondary disclosure would have within their social networks – including one who used ‘death sentence’ terminology to refer to the social death of his relationships within the gay community.

Discussion

Even as gay, bisexual, and other men who have sex with men living with HIV are increasingly exposed to messaging that promotes and celebrates viral suppression (e.g.

U=U movement, 2018 Prevention Access Campaign) and the availability of new means of prevention (e.g. PrEP4Love campaign, Chicago PrEP Working Group, [2018]), many continue to experience substantial HIV-related stigma in clinical encounters and daily life (Maloney et al. 2017; Dubov et al. 2018; Elopre et al. 2018).

While HIV knowledge and access to biomedical prevention and treatment have created possibilities for reducing disclosure-related stigma, uneven awareness and internalisation of these advances may limit the impact. Regarding the rights and responsibilities involved in sexual encounters, our findings suggest that young gay and bisexual men living with HIV continue to perform moral labour through managing others' reactions to disclosure, educating partners on clinical aspects of HIV, and negotiating risks of disclosure-related harms and inaccurate sexual health information from partners. Past HIV public health prevention approaches in which people living with HIV were 'just told to just tell' do not adequately reflect the social, legal, clinical and moral shifts brought about, at least in part, by scientific advances. Incorporating perceptions and discourses related to biomedical prevention and treatment options into future programmes and interventions may help reduce inequities between people living with HIV and those with negative and unknown status during disclosure, making the reduction of HIV transmission more a matter of shared responsibility.

In this study, some participants received supportive responses from sexual partners after describing themselves as virally undetectable, reflecting increased awareness among some gay, bisexual and other men who have sex with men of biomedical advances such as TasP (Holt 2015). Interventions should account for the relationship between perceptions of biomedical prevention and treatment advances, sexual behaviours among gay, bisexual and other men who have sex with men, and community ethical frameworks underlying these perceptions and behaviours (Ainslie 1999). Given some negative responses to participants' disclosure of their undetectable status, research should also examine the impact of trust between partners or potential partners on disclosure decision-making in the context of these advances (Bird, Eversman and Voisin 2017). In the clinical setting, it is incumbent upon health care providers to initiate discussions around disclosure that account for individuals' transmission risk, prevention strategies, relationship factors and reactions that may threaten safety and wellbeing.

Participants described feeling tasked with educating others on the nuances of treatment and the meanings of clinical parameters like having an 'undetectable' viral load. In future interventions, disseminating biomedical prevention strategies such as PrEP and 'Undetectable = Untransmissible' will require addressing mixed knowledge levels in the context of inequitable access to these interventions (Elopre et al. 2017). In this study, PrEP was not frequently discussed by participants, possibly reflecting that participants were already living with HIV, and/or the fact that data were collected between 2014 and 2016, when PrEP use in North Carolina was limited. PrEP use in the USA remains low overall, and particularly among gay and bisexual men who are young, Black, uninsured or living in rural areas (Sullivan et al. 2020, Harris et al. 2019). Yet high levels of PrEP uptake have been achieved within a clinical trial setting, emphasising the need for expanded access to these tools through future intervention work that addresses both individual and structural-level barriers (Wheeler et al. 2019, Lockard et al. 2019, Li et al. 2019).

Most participants in this study were strongly aware of HIV stigma ranging from others' stigmatising reactions, to institutional forms of stigma such as criminalisation of HIV risk. Future interventions that connect gay and bisexual men of all serostatuses may allow people to resist and shift HIV stigma (Bauermeister et al. 2019). Additionally, given biomedical advances such as TasP, PrEP, and U=U that have expanded prevention and treatment options, state HIV policies should be updated to reflect current science. For example, in 2018, North Carolina amended its public health measures to allow people living with HIV who had been virally suppressed for six months to not disclose their status and to have condomless sex (The Center for HIV Law and Policy 2017).

Limitations

As a secondary analysis of intervention development data, this study has several limitations related to thematic saturation and transferability of findings. Regarding thematic saturation, due to the nature of the parent study, participants were not systematically asked about their perceptions of biomedical advances in the disclosure process. As a result, we could not draw on the methodological tools typical of Grounded Theory-informed approaches such as theoretical sampling to reach theoretical saturation, or to generate and test theory. As such, our study is necessarily exploratory. In terms of the transferability of findings, as the intervention focussed on disclosure experiences, focus groups and interviews did not include sufficient discussion of non-disclosure. Furthermore, data reduction measures likely selected for men with more access or knowledge of HIV biomedical prevention and treatment approaches. At the same time, because the intervention population was located in North Carolina, USA, those in settings where biomedical advances have diffused more widely may report different disclosure experiences. As racism is a substantial barrier to disclosure for young Black gay and bisexual men, who were the majority of participants in this study, more information is needed on these men's risk reduction strategies in the context of treatment and prevention inequities (Arnold, Rebchook and Kegeles 2014; Maulsby et al. 2014). In spite of these limitations, this analysis generated important questions and considerations about the experience and challenges of disclosing one's HIV status amidst highly variable biomedical awareness and understanding.

Conclusion

In conclusion, future public health research and clinical HIV interventions for young gay, bisexual and other men who have sex with men must be sensitive to existing tensions between ethical mandates arising from older prevention paradigms and the current experiences of people living with HIV in the context of expanded prevention and treatment options. In this study, biomedical treatment and prevention advances allowed young gay and bisexual men living with HIV to resist attributions of blame but also necessitated significant labour in managing the disclosure process in the context of persistent HIV stigma. With the advent of U=U, future studies should examine shifting distributions of responsibility and potential for stigmatisation related to sexual risk reduction in relation to biomedical advance. Serostatus neutral interventions that advance the shared responsibility for prevention, similar to approaches based in communitarian ethics of the past (Flowers, Duncan and Frankis 2000; Flowers 2001; Davis 2008), may help dispel persistent stigma; foster increased adoption of measures to reduce transmission risk; and create safer contexts for serostatus disclosure.

Acknowledgements

We thank Christopher Hurt for providing background on HIV biomedical treatment and prevention technologies, and Emily Yen for suggesting a focus on ethics. This work was supported by the US National Institute of Allergy and Infectious Diseases under Grant T32 AI007001; the US National Institute of Mental Health under Grants R44 MH104102 and R43 MH104102; and the University of North Carolina at Chapel Hill Center for AIDS Research (CFAR), a US National Institutes of Health funded programme (P30 AI050410).

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Table 1.

Evolution of gay community perceptions of responsibilities related to disclosure and biomedical aspects of HIV prevention and treatment

Time Period (Year)	**Pre – 1985**	**1985 – 1996**	**1996 – 2011**	**2011 – Present**
Biomedical Context and Advances (Selected)	Discovery of HIV	Antibody testing (1985)	Highly Active Antiretroviral Therapy (1996)	Treatment as Prevention (2011)
	Testing/treatment not widely available		Viral load testing (1996)	Pre-Exposure Prophylaxis (2012) Undetectable = Untransmissible (2017)
Legal context		State and federal criminalisation of HIV transmission including non-disclosure and condomless sex for PLHIV		Non-disclosure and condomless sex decriminalised for VS PLHIV - some states
Gay community perceptions of responsibility for preventing HIV transmission	Communitarian • Assume all are living with HIV	Individual PLHIV • Disclosure	Individual PLHIV • Disclosure • More options for disclosure (e.g. online dating) • ART initiation, adherence, and maintain VS • Discuss VL and ART with partners • Seroadaptive strategies	Individual PLHIV • Disclosure • More options for disclosure (e.g. online, dating apps) • ART initiation, adherence, and attain/maintain VS • Discuss VL and ART with partners • Seroadaptive strategies • Biomed-matching strategies
		HIV-neg/unknown • HIV testing	HIV-neg/unknown • HIV testing • Seroadaptive strategies	HIV-neg/unknown – on PrEP • HIV testing • Disclose PrEP use • PrEP adherence • Seroadaptive strategies • Biomed-matching strategies HIV-neg/unknown – not on PrEP • HIV testing • Initiate PrEP • Seroadapative strategies

ART = antiretroviral therapy; PLHIV = people living with HIV; PrEP = pre-exposure prophylaxis; VL = viral load; VS = virally suppressed or viral suppression

Table 2.

Focus group discussion and in-depth interview participant demographic characteristics

	Participant	**Age**	**Race**	**Sexual Identity**
Focus Group 1 (n=2)	Kinder	23	Black	NA[1]
	Chocolate	24	Black	NA
Focus Group 2 (n=6)	Mr. Sanchez	23	Hispanic/Latino	NA
	Bobby	29	Black	NA
	Moulin	23	Black	NA
	Elias	24	Black	NA
	DJ	20	Black	NA
	Miracle	24	Black	NA
Interviewees (n=18)	Michael	22	Black	Gay
	Bryan	26	Black	Gay
	Paul	29	White	Gay
	Brandon	24	Black	Bisexual
	Chris	29	Black	Bisexual
	Will	24	White	Gay
	Conrad	25	Black	Gay
	Eric	27	Black	Gay
	Robert	25	Black	Bisexual
	Daniel	29	Black	Gay
	Sam	22	Black	Bisexual
	Darrell	26	Black	Gay
	Matthew	21	Black	Gay
	Kevin	25	Black	Gay
	Marc	29	Black	Gay
	Jason	22	Black	Gay
	Curtis	28	Black	Gay
	Lucas	24	White	Gay

[1] Sexual identity was not enquired into during focus groups. To be eligible, participants had to report any anal sex with a man in the past 12 months.