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Response to diversification of risk-reduction strategies and reduced threat of HIV may explain increases in condomless sex

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We appreciate the correspondence by Kippax and Holt [1] regarding explanations for the increases in condomless sex. We agree that there may have been changes in social norms due to the effectiveness of antiretroviral therapy (ART) that are not captured by our survey. Furthermore, the measures we used for seroadaptive behaviors were based on participants' last sex act and do not reflect the complexities of negotiations for safer sex throughout a partnership. However, we disagree with Kippax and Holt [1] who propose that the predominance of concordant condomless sex in the survey suggests an increase in seroadaptive strategies. The percentage of condomless sex partnerships that was concordant does not increase over time. Further, seroadaptive behaviors are predicated on engaging in different sexual practices according to whether partners are HIV seroconcordant or serodiscordant. The important question is not whether concordant condomless sex is more likely than discordant condomless, as suggested by Kippax and Holt [1], but whether concordant condomless sex is more likely than would be expected by chance alone. If men are consciously choosing partners of the same serostatus, there should be more positive–positive and negative– negative partnerships than would occur by chance according to the marginal probabilities dictated by HIV prevalence and the number of partnerships in our sample. Using a Z test, we compared observed and expected percentages of concordant partnerships. Among MSM reporting condomless sex at last sex using all years combined, 15% were HIV-positive, 76% were HIV-negative, and 9% had unknown HIV status. We used this distribution to compute the expected frequencies of concordant condomless sex partnerships. Among condomless sex partnerships at last sex, 52% were HIV-negative concordant and 9% were HIV-positive concordant. We found evidence suggesting that HIV-negative MSM are not serosorting; they report concordant partners less frequently than what would be expected through random mixing when they engage in condomless anal sex (52% observed vs. 57% expected, $P < 0.001$), possibly due to insufficient information about their partners' HIV status. In contrast, our data suggest that HIV-positive MSM may be purposely serosorting when they engage in condomless sex (9% observed vs. 2% expected, $P < 0.001$). Therefore, although we found evidence to suggest that HIV-positive MSM may be serosorting, the preponderance of concordant partnerships among HIV-negative MSM is not beyond what would be expected through random mixing.

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Conflicts of interest

There are no conflicts of interest.

As Kippax and Holt [1] note, the diversification and promotion of behavioral and biomedical prevention strategies makes exclusive condom use less likely among MSM. However, having more prevention strategies available for MSM than before does not mean that MSM at highest risk are accessing them. For example, the National HIV Behavioral Surveillance data have shown that only 4% of MSM were using preexposure prophylaxis (PrEP) in 2014 [2]. PrEP use, although low, was higher among white compared with black MSM and among those with greater education and income. Young, black MSM, despite being at higher risk, were less likely to have a PrEP indication compared with young MSM of other races/ethnicities.

Kippax and Holt [1] suggest that social norms around condom use have changed due to greater optimism around HIV treatment and prevention, our concern is that the declines in condom use leave a prevention gap that is not bridged at the same pace by PrEP or treatment as prevention. Furthermore, seroadaptive behaviors can only lower risk in the context of disclosure and accurate knowledge of HIV status.

As noted by the authors for Australia, similar increases in condomless sex have been reported in other places including Montreal [3], London [4], Glasgow, Edinburg and Scotland [5], Amsterdam [6,7], Denmark [8], and Paris [9]. Mathematical modeling suggests that increases in HIV incidence in the United Kingdom, over a period in which ART coverage and viral suppression are also increasing, is likely due to the countereffect of concomitant increases in condomless sex among MSM [4,10–12]. Modeling work from the Netherlands reached similar conclusions suggesting that the reductions in HIV incidence due to ART and earlier HIV diagnosis have been entirely offset by risk behavior increases among MSM [13]. These findings show that modest increases in condomless sex are enough to negate the preventive benefits of ART, highlighting the vulnerability of any new prevention initiative, such as ART initiation at HIV diagnosis, if it leads to increases in condomless sex [10].

Despite the advances in prevention, key challenges keep many MSM from accessing needed services, including lack of accurate knowledge of HIV status (their own and their partner's), lack of information about HIV risk and prevention, misperceptions regarding personal risk, lack of health insurance, and inadequate health services. As no single strategy provides complete real-world protection, multiple approaches are needed to reduce new HIV infections.

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