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# Responsibilization and Sexual Stigma Under Austerity: Surveying Public Support for Government-Funded PrEP in England

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**Abstract**
Under austerity, governments shift responsibilities for social welfare to individuals. Such responsibilization can be intertwined with pre-existing social stigmas, with sexually stigmatized individuals blamed more for health problems due to "irresponsible" sexual behavior. To understand how sexual stigma affects attitudes on government healthcare expenditures, we examine public support for government-provisioned PrEP in England at a time when media narratives cast the drug as an expensive benefit for a small, irresponsible social group and the National Health Service's long-term sustainability was in doubt. This paper uses data from an original survey ($N = 738$) conducted in September 2016, when public opinion should be most sensitive to sexual stigma. A survey experiment tests how the way beneficiaries of PrEP were described affected support for NHS provision of it. Contrary to expectations, we found that support was high (mean = 3.86 on a scale of 1 to 5) irrespective of language used or beneficiary group mentioned. Differences between conditions were negligible. Sexual stigma does not diminish support for government-funded PrEP, which may be due to reverence for the NHS; resistance to responsibilization generally; or just to HIV, with the public influenced by sympathy and counter-messaging. Having misjudged public attitudes, it may be difficult for the government to continue to justify not funding PrEP; the political rationale for contracting out its provision is unnecessary and flawed. With public opinion resilient to responsibilization narratives and sexual stigma even under austerity, welfare retrenchment may be more difficult than social policymakers presume.

**Keywords** Sexual stigma · HIV · Pre-exposure prophylaxis (PrEP) · Public opinion · Sexual risk behavior · Gay men · England

## Introduction

Under neoliberal conditions of austerity, responsibility for citizens' health and wellbeing shifts from the state to individuals (Adam, 2016). Governments and media increasingly utilize "responsibilization" narratives, which emphasize the role of individuals in managing risk to their wellbeing, to rationalize—and facilitate—welfare state retrenchment (Adam, 2016). Sexual behavior is a frequent target of responsibilization; sexual citizens deemed particularly risky are portrayed as being at fault for their own conditions through "irresponsible behavior" (Adam, 2016; Calabrese et al., 2016; Hoggett, Wilkinson, & Beedell, 2013). Amidst care rationing, government decisions on healthcare expenditures are often controversial, but especially those concerning sexual health. Moreover, elected officials are sensitive to public opinion on healthcare spending. Under this backdrop, a key question emerges that is of great import for the health and wellbeing of sexual minorities: in times of austerity, does sexual stigma affect public support for new government spending seen to benefit "risky" and "irresponsible" individuals, such as gay men? More generally, how does the framing of preventative drugs associated with risk taking and sexual minorities affect public attitudes on the government provision of them?

In this paper, we answer this question through the case of National Health Service England's (NHSE) 2016 decision to not fund full access to the highly efficacious anti-HIV drug pre-exposure prophylaxis (PrEP), which came amidst contentious debates about the need for cutting costs to save the NHS. Using a "most likely case" in which public opinion of government-provisioned PrEP would expectedly be at its lowest point and most sensitive to responsibilized views of

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perceived beneficiaries, we sought to examine whether sexual stigma toward perceived beneficiaries changes public support for PrEP—even in times of austerity.

This study aims to offer empirical insights about actual (rather than anticipated) public attitudes toward PrEP in England, information that decision-makers did not have when they chose to not fund full access to the drug. In so doing, it fills gaps in social science research on PrEP and research on public perception of its provision outside the US and where the drug has yet to be made fully available (see Auerbach & Hoppe, 2015; Baeten & Grant, 2013; Calabrese et al., 2016). It also sheds light on the understudied political factors affecting PrEP provision (Cáceres, O'Reilly, Mayer, & Baggaley, 2015; Underhill, Operario, Mimiaga, Skeer, & Mayer, 2010), drawing attention to how implementation of a highly efficacious but not broadly applicable drug can be contingent upon the way political institutions interpret public dis/approval of such expenditures—especially where healthcare is publicly funded and social spending under decline. More broadly for sexuality and social policy, this study contributes to our understanding of how framing of potential beneficiaries and their behaviors can—and cannot—affect public attitudes toward government health policy decisions. It also challenges assumptions about the public's sensitivity to responsibilization discourses, and the strength of these discourses in shaping their support for government-provisioned sexual health interventions. As we illustrate, responsibilization attitudes relating to sexuality and sexual behaviors do not appear to run as deeply as decision-makers and media seem to anticipate.

## Theoretical and Policy Background

### Public Opinion, Responsibilization, and "Risky" Sexual Behavior

Public opinion on social programs is not only integral to the success of the policies behind them, but also shapes citizens' perceptions of government responsiveness and accountability; public opinion is thereby fundamental for the legitimacy of the welfare state itself (Bendz, 2017; Burstein, 1998; He, 2018; Judge & Solomon, 1993; Soss, 1999). But the actual impact of public opinion on *policymaking* is unclear. Some estimate that it affects policy three quarters of the time it is measured, with substantial effect at least a third of the time (Burstein, 2003). The impact of public opinion on policy can be contingent on various factors: public awareness; the clarity and size of attitude shifts; issue salience and newness; and the policy process as mediated by the institutional structure of government (Burstein, 1998, 2003; Jacobs & Shapiro, 1994; Page & Shapiro, 1983; Raven, Achterberg, Van der Veen, & Yerkes, 2010). To complicate matters further, policymakers do not always have a good understanding of public opinion. As such, its indirect effects—how policymakers *anticipate* public opinion—are especially strong and factor most into how policy is crafted (Page & Shapiro, 1983; Whiteley, 1981).

On health policy, governments can be especially sensitive to public opinion (Jacobs, 1992; Jacobs & Shapiro, 1994; Judge & Hampson, 1980). When issues are particularly controversial within the general public, crisis-era policies have been retained to avoid public backlash even when shown to be scientifically outdated. For instance, decades after high-profile HIV-contaminated blood donation scandals, sexually active MSM (men who have sex with men) still face bans on donating blood despite the emergence of advanced blood screening technology (Galarneau, 2010). Where healthcare is publicly funded, like in Britain, the views of the public are even more important to consider (Judge & Solomon, 1993). Active public consultation-seeking by the NHS and the popularity of the institution has meant that public opinion about healthcare is an increasingly integral, potent force in policy debates and policymaking (Harrison & Mort, 1998; Jacobs, 1992; Judge & Solomon, 1993; Whiteley, 1981).

On policies related to sexual health, public opinion becomes focused less on institutions and more on individuals. With increased emphasis on preventative health education, the locus of responsibility for sexual health is placed heavily on the individual, a shift corresponding to the rise of preventative medicine more broadly (Pill & Stott, 1982) and in the context of the shrinking welfare state in particular. For diseases like HIV especially, individuals are believed to be responsible for protecting themselves from contracting it (Adam, 2005, 2016), and those with HIV expected to manage it individually (Race, 2001). Such attitudes of responsibilization are especially prominent where sexuality is seen in normative terms and in relation to behaviors perceived to be morally unacceptable (Calabrese et al., 2016; Michael et al., 1998). As with MSM "blood bans," strong moralizing on issues of sexual behavior is common in public health policymaking (Michael et al., 1998) and can impede the development of more effective sexual health policies. Concerns that medical advances can enable sexual promiscuity parallel similar concerns raised over HAART (highly active anti-retroviral therapy) in the mid-1990s for HIV/AIDS (Race, 2015) and oral contraceptive in the 1960s (Auerbach & Hoppe, 2015).

Responsibilization attitudes, frequently informed by homophobia and tropes of hypersexualization, are particularly prominent when sexual minorities are seen as engaging in "risky" practices. Following HIV/AIDS outbreaks globally, for instance, HIV-positive gay men were seen as being "at fault" for contracting the virus through "hedonistic" sexual behavior

(Sabatier, 1988; Shilts, 1987). Cognizant of such attitudes in the United States, Senate policymakers during the epidemic omitted any mention of homosexuality in AIDS-related social benefits policies—allowing the policies to pass without public outcry, and providing political face for senators in support of such policies (Schroedel & Jordan, 1998).

In contexts like Britain, populist political discourses of "fairness" and "deservedness" (e.g., "the deserving poor") underlying austerity measures have also influenced public opinion. In particular, they heighten notions of "unacceptable" risk, self-indulgence (see Wilson, 2007), and therefore responsibilization on the part of marginalized groups (Cain, 2016; Hoggett et al., 2013; Roy & Buchanan, 2016). Under such conditions, we would expect perceptions of risky sexual behavior—and by association, sexual identities—to matter a great deal in public opinion of sexual health policy. On the issue of HIV, these discourses dictate that the cost of prevention should be the individual's responsibility, and not the taxpayers': if one cannot afford PrEP, cheaper preventative measures like condoms should be used (or one should simply abstain from sex altogether).

## Policy Background: PrEP in England

Unlike many high-income countries (and even some low- and middle-income countries), pre-exposure prophylaxis (PrEP) is not available to the general public across all devolved regions in Britain. Despite a nationwide study of 544 high-risk gay men that demonstrated the drug's high clinical effectiveness at preventing HIV (McCormack et al., 2015)—and the conclusion of researchers that full availability of the drug could save billions of pounds from the lifetime treatment costs for new HIV-infected individuals (Cambiano et al., 2018)—in June 2016, NHSE decided against providing PrEP, claiming in part that it did not have the legal power to commission the drug as a prevention strategy. The National AIDS Trust challenged the NHSE's decision, winning its case in the High Court in August 2016 and subsequently in the Court of Appeal in November 2016 (following the NHSE's appeal of the initial High Court decision). However, unlike their counterparts in Wales and Scotland and despite the ruling, NHSE has yet to make the drug freely available across England.

Policy decisions like this do not occur in a vacuum and must be examined within the current political and economic context. Although Britons continue to strongly revere the NHS, arguments over its funding, privatization, treatment rationing, and doctor salaries, have become increasingly divisive (Campbell, 2012). Debates during the EU referendum demonstrate how public reverence for the NHS as a British institution has taken on a protectionist quality (Gayle, 2017; Moore & Ramsay, 2017); promises to redirect to the NHS £350 million bound for the EU per week were central to the Leave campaign's victory in the June 2016 vote (Simpkin & Mossialos, 2017).[1] While the government aims to engage in rational, cost-effective policymaking, it is also clearly sensitive to public opinion (Soroka & Lim, 2003).

Given the media response after the High Court overruled the NHSE in August 2016, concerns of a public backlash seemed warranted: the front page of *The Daily Mail* (Britain's most read newsbrand) derided the court for funding a "lifestyle drug" and "promiscuity pill," while a national television news program led its coverage with a story on "Free £20M drugs for gays who won't use condoms" (Duffy, 2016). The media narrative suggested that tax contributions used to cover the costs of PrEP are tantamount to paying for gay men to have unprotected sex—essentially, taxpayer-funding of "irresponsible" lifestyles (Cairns, 2016). The decision was framed in zero-sum terms: giving PrEP to gay men, who are presumably less deserving because they are victims of their own "lifestyle" choices, takes away needed drugs from those who are not: *The Daily Mail* exclaimed "NHS told to give out £5,000-a-year lifestyle drug to prevent HIV—as vital cataract survey is rationed" and suggested that children with cystic fibrosis would go without treatment (Ridley, 2016). A study of media coverage in the six most widely read newsbrands (both online and print) from March to December 2016 found that 79% of PrEP-related articles were published by conservative leaning brands (*Daily Mail*, *Times*, *Telegraph*, *Sun*), whereas liberal leaning *Guardian* and *Mirror* published just 13% and 8%, respectively. Thematic analyses of the coverage found differences that corresponded with political leanings, as well: stories on PrEP in conservative newsbrands were more likely to mention "sexual decision making" and the financial implications for other patient groups than those in liberal outlets (Procter, 2017).

In its own response to the ruling, NHSE suggested that some treatment rationing would have to occur to accommodate the demands of providing PrEP widely (Duffy, 2016).

This media narrative in England reflects a broader trend of PrEP users stigmatized as irresponsible "Truvada whores" (a reference to the brand name of the drugs used for PrEP) (Auerbach & Hoppe, 2015; Duran, 2012; Race, 2015). Even some within gay and HIV communities suggest PrEP is an overly expensive excuse for continuing to engage in "irresponsible" risky sexual behavior (e.g., Duran, 2012; Weinmeyer, 2014). On the provider side, a survey of healthcare practitioners in the US and Canada further found

[1] Indeed, in Britain (but also elsewhere in Europe and the US), immigration is becoming of increasing political concern amidst rising nationalist and ultra-nationalist populism (NCSR, 2017). With growing anti-immigrant sentiment in the political and public realms, the British government has pursued increasingly restrictive immigration policy (Moraes, 2017; Whiteley, 1981). The British Social Attitudes Survey found that immigration was "at the heart" of the recent referendum vote to leave the EU (NCSR, 2017). Although in the US, Calabrese et al. (2016) used race as a marker of the outgroup. But due to the current political environment, non-UK born individuals were selected as an outgroup for our study.

that while support for providing PrEP is generally high, there are still mixed feelings about the drug, with some expressing "moral issues" with it and others suggesting medicine in general should not be used to artificially reverse "bad" behaviors (Karris et al., 2014).

Little is known about how general publics in England (or anywhere in the world) perceive PrEP and if they support the public provision of it. Extant literature primarily focuses on efficacy and adherence of the drug (Baeten et al., 2012; Grant et al., 2010). Insofar as studies examine attitudes toward PrEP, most have focused on perceptions among providers and beneficiaries (e.g., Grov & Kumar, 2018; Rocha et al., 2014; Young, Li, & McDaid, 2013; Wheelock et al., 2012). Only one study to date has examined general perceptions: a survey experiment of 154 respondents in the US found that anti-Black and anti-gay attitudes decreased support for the provision of PrEP (Calabrese et al., 2016).

## Case Selection and Hypotheses

In this paper, the NHSE decision on PrEP functions as a most likely case (Gerring, 2007); the political, economic, and media conditions surrounding the decision were such that public opinion on government provision of the drug would be most likely sensitive to responsibilization narratives and sexual stigma. Given low general public knowledge about PrEP, we also expect that the public would most likely turn to the media for cues about opinion formation, thereby increasing their exposure to predominately negative media narratives (McCombs, 2002).

The study was designed to examine how public support for government-provisioned PrEP might differ across various *specific* target populations. We are interested firstly in how changing the target population affects general support for government provision of PrEP. Indeed, public support for policies might depend on whether target groups are viewed more positively or negatively in general (Schneider & Ingram, 1993); when the policies are seen as targeting a particularly narrow and relatively unpopular subsection of the population they enjoy less public support (Skocpol, 1991; Whiteley, 1981). During the AIDS epidemic, for example, concern from policymakers and the general public grew when HIV was seen as a virus that could attack "innocent victims," such as young hemophiliacs, rather than socially transgressive, "hedonistic" gay men (Shilts, 1987, p. 225). Similarly, building upon research in the US (Calabrese et al., 2016), we expect support for funding the drug for other "outgroups" (including immigrants) will be lower than for the general population and those whose stigmatized behavior is not noted (such as pregnant women). As such, we pose our first research question: How does framing the use and testing of a drug around specific populations affect general support for that drug? (RQ1).

As evident in related cases of sexual moralizing in public opinion and policymaking, support for government funding of PrEP may further vary depending on the degree to which those seen as primary beneficiaries of the drug are negatively perceived on the basis of presumed sexual behavior—and thus, responsibilized (Herek, 2004; Lingiardi, Baiocco, & Nardelli, 2012; Pistella, Tanzilli, Loverno, Lingiardi, & Baiocco, 2018). Here, we are concerned with sexual stigma, which we define as negative attitudes toward any *non-heteronormative* behavior, identity, or community—that is, those which do not subscribe to the heteronormative ideal of heterosexual monogamous coupledom. We are interested not only in beneficiary identity but also, and especially, how sexual behaviors being made salient—and the degree to which they are stigmatized, particularly when associated with certain group identities—affects public support of PrEP. In the context of PrEP, the public, media, and NHSE have generally characterized gay men and MSM who do not consistently use condoms as "high risk"—and that those who admit engaging in such behavior and express interest in PrEP are somehow more irresponsible (see Race, 2015).

There is reason to assume, too, that most gay men are seen as the "over-sexed other" even without specific evidence about individual behavior (Wilson, 2007), and that those using this drug will be automatically viewed as hypersexualized irrespective of their actual behavior (Calabrese et al., 2014; Race, Lea, Murphy, & Pienaar, 2016). This suggests a pair of separate hypotheses. First, we hypothesize that general support for the provision of PrEP will decrease when perceived beneficiaries are gay (H1)—this is an implied stigma, separate from that of their actual behavior. Second, the greater PrEP users are seen as "irresponsible" and engaging in "high-risk" behavior, the less likely respondents are to support funding (H2). This should be true of anyone engaging in risky behaviors, regardless of their sexual orientation.

Moreover, we are interested not just in public support of the NHS funding PrEP in general, but also in how support may differ for various specific potential beneficiaries of the drug (RQ2)—that is, are respondents more or less willing to support funding PrEP for different types of people? This should also be affected by the experimental conditions: the most obvious outcome being that people should support the drug funded for the populations for which they think it has been tested—that is, for the populations to which they are exposed in their experimental condition (H3). For instance, people who are exposed to a condition highlighting testing of the drug among pregnant women might show more support for funding the drug for pregnant women.

## Methods

### Participant Recruitment

This paper draws upon an original survey of 738 respondents in England conducted in September 2016, which represents the largest survey ever conducted on general public attitudes about PrEP in the country. Participants were recruited through Prolific, a service that matches researchers with people willing to do small tasks online (like taking surveys) for small amounts of money. The panel was limited to participants who were over the age of 18, had at least a 90% approval rating, and at least 500 jobs completed on the platform. Such requirements are recommended as best practice when dealing with online samples like those of Prolific or Mechanical Turk (Peer, Vosgerau, & Acquisti, 2014).

The survey was designed to answer the research questions outlined above, with a focus on the survey experiment element described below. Participants gave informed consent, and were then asked questions about PrEP (awareness of the drug, NHS funding for different populations), diseases other than HIV (Human Papilloma Virus and type 2 diabetes), opinions on political issues (LGBT issues, taxes, Brexit), and demographics.

Within this, we imbedded a survey experiment, similar to those previously used to explore attitudes on PrEP by other scholars in the US (Calabrese et al., 2016) and by our comparative research public opinion transgender policies in the UK and US (Bode & Hildebrandt, 2018). The only difference for each condition was what group PrEP was described as targeting in a clinical trial. Specifically, participants were told, "PrEP is a drug used to protect against exposure to the HIV virus. In a recent study of approximately 500 [GROUP INSERTED HERE], this drug was shown to be almost entirely effective at preventing HIV infection when used as directed. Based on this, would you approve or disapprove of the NHS covering the costs of PrEP?" The groups shown were "people" (control), "gay men," "gay men who have frequent sex with multiple partners," "high risk gay men," "people who have frequent sex with multiple partners," "pregnant women," and "non-UK born people."

### Measures and Experiments

We measure biases toward perceived beneficiary groups in two ways. First, as described above, respondents were randomly assigned to one of seven treatment groups: people [most general, with no other descriptor] ($N = 115$), gay men ($N = 123$), people who have frequent sex with multiple partners ($N = 105$), gay men who have frequent sex with multiple partners ($N = 90$), high-risk gay men ($N = 94$), non-UK born people ($N = 99$), and pregnant women ($N = 101$). Based upon the expectation that there would be moralizing around sex and therefore degrees of negative bias depending on the sexual behavior—and depending on whether the sexual behavior is associated with gay men versus other groups—groups mentioning different sexual behaviors were included. Different language was used to describe gay men, and their sexual activity, because of an expectation that this information could decrease support for expenditures to benefit them. Similarly, due to an expected anti-immigrant bias, we included a treatment group of non-UK born people. On the other hand, we included pregnant women to test if they, and their unborn children receive more public support for PrEP provision. PrEP support is measured on a scale of 1 (strongly disapprove) to 5 (strongly approve), with a mean of 3.86 (standard deviation = 1.04).

The second measure of beneficiary bias comes later in the survey, where we present all respondents with a similar list of potential beneficiary groups and ask them to rate approval of NHS funding for each group on a 5-point Likert scale. Because we were not looking for changes in framing or language, we include a slightly different list of beneficiaries of three types: first, we include groups identified by health authorities as most at risk for contracting HIV: gay men, drug users, and sex workers (CDC, 2017; NHS, 2017); second, we include groups which might experience positive bias (sympathy) based on the expectation that they might be identified by the public as "innocent" populations: pregnant women and adolescents (Rochkind, DuPont, & Ott, 2009; EKOS, 2012; Shilts, 1987); finally, we include an outgroup specific to the British research context: non-UK born people. Support for funding varies by target population (see Table 2), with a mean of 3.71 (standard deviation = 0.95) on a scale of 1 to 5.

## Analyses and Results

A range of demographic and attitudinal information was collected for respondents, including age (22.3% 18–24, 34.4% 25–34, 20.9% 35–44, 14.1% 45–54, 6.4% 55–64, 1.8% 65 or older), gender (40.7% male, 58.8% female, .6% other or prefer not to say), sexual orientation (91.3% heterosexual, 3.6% homosexual, gay, or queer, 4.0% other, 1.1% prefer not to say), race and ethnicity (87.4% white, 2.4% mixed race, 6.4% Asian/Asian British, 2.8% Black/African Caribbean/Black British, 1.2% other ethnic group), and political ideology (24.5% conservative, 28.3% moderate, 47.2% liberal). While the sample is more female and younger than the UK population as a whole, these demographics otherwise generally reflect the characteristics of the United Kingdom population as a whole (Office for National Statistics, 2016).

We began by considering differences in support for PrEP between each condition in the experiment, to answer our first research question (RQ1). In general, we were surprised that support for PrEP—once people are told what it is—is

consistently high, even in the lowest support condition where it is still well over the midpoint (see Table 1). The average support overall is 3.86 on a scale from 1 to 5, with 44% approving of NHS funding and an additional 29% strongly approving. While an ANOVA [$F(6, 720) = .58$, $p = 0.75$] does not find overall statistical significance of condition, when we employ pairwise comparisons we find one main difference—the lowest support is for the condition describing a study of people who have frequent sex with multiple partners (3.73), and the highest support is for pregnant women (4.00; $p < .07$). Only these two conditions are statistically distinguishable. To further interrogate H1, which expected that conditions mentioning gay people would garner lower support than those that do not, we combine the three conditions ("gay men," "high risk gay men," and "gay men who have frequent sex with multiple partners") that do so, and compare them to the remaining four conditions. This comparison shows essentially no difference, with almost identical means (3.860 for conditions mentioning gay people compared to 3.861 for those that do not, $t(420) = 0.01$, $p = .99$). This fails to support our first hypothesis (H1), which suggested that descriptions of PrEP studies that dealt with gay men would garner less support than those that did not.

Our second hypothesis suggested that mentions of risky behavior should encourage lower support for funding PrEP. Descriptively, there is slightly more support for this—the condition that receives the least support in Table 1 is "people who have frequent sex with multiple partners." To formally test this, we again combine conditions that explicitly or implicitly mention risky behavior ("people who have frequent sex with multiple partners," "gay men who have frequent sex with multiple partners," and "high risk gay men") and compare to those other conditions which do not mention behaviors at all. Again, there is very little difference whether risky behaviors are mentioned (mean support = 3.82) or not (mean support = 3.89, $t(726) = 0.91$, $p = 0.36$). This provides no support for H2.[2]

Next, we conducted analyses to test our second research question (RQ2) and our third hypothesis (H3), both of which deal with support for funding the drug for specific populations. Recall respondents were asked whether they would support funding the drug for gay men, non-UK born people, pregnant women, adolescents, drug addicts, and sex workers. Note that these categories are similar to (gay men, non-UK born people, pregnant women) but not entirely consistent with the original categories of population included in the experimental conditions (none of which mentioned adolescents, drug addicts, or sex workers). In general, we expected to see framing effects of the experimental condition to which people were exposed—that is, those exposed to a condition relating to a particular sub-population would be more supportive of providing the drug to that sub-population (H3). However, this hypothesis is generally not supported by post hoc analyses. The one exception is for pregnant women, where those exposed to the condition describing PrEP as a drug for pregnant women were significantly more likely to support use of it for that population ($p$ values range from 0.01 to 0.08), when compared to every other condition except two (high-risk gay men ($p = 0.14$) and non-UK born people ($p = 0.28$)).

To further answer our second research question (RQ2), we investigated general support for funding PrEP for different populations, which is shown in Table 2. Again, support for providing the drug to all populations is quite high, but it is highest for pregnant women (3.95) and lowest for non-UK born people (3.38).

Finally, we explored what respondent characteristics were broadly associated with support for public funding of PrEP. To do so, we estimated an ordinary least squares regression with PrEP support as the outcome (respondents from all conditions were pooled together in this analysis). Because these data are not representative of nor randomly sampled from the broader population, results should be interpreted with caution. The variables we considered in predicting support for PrEP in our sample were gender (59.1% female), race (87.4% white),

**Table 1** Support for funding PrEP by experimental condition

| Treatment | Mean |
|---|---|
| People | 3.86 |
| Gay men | 3.85 |
| High-risk gay men | 3.84 |
| Gay men who have frequent sex with multiple partners | 3.89 |
| People who have frequent sex with multiple partners | 3.73 |
| Pregnant women | 4.00 |
| Non-UK born people | 3.85 |

The differences between conditions are not significant, with the exception of the difference between people who have frequent sex with multiple partners and pregnant women, which is marginally significant ($p = 0.07$)

**Table 2** Support for funding PrEP for different populations

| Population | Mean level of support |
|---|---|
| Gay men | 3.90 |
| Non-UK born people | 3.38 |
| Pregnant women | 3.95 |
| Adolescents | 3.71 |
| Drug addicts | 3.44 |
| Sex workers | 3.87 |

[2] The analysis is similar if the condition "high risky gay men"—which mentions *risk* but does not mention *behavior*—is reclassified. In that case, the mean for risky behavior is 3.81 and for other conditions is 3.88, $t(726) = 0.86$, $p = 0.39$.

age (mean = 3.5 where 3 indicates 25–34 years old and 4 indicates 35–44 years old), sexual orientation (7.7% gay or other, 92.3% straight), political ideology (on a scale of 1 to 7, where liberal is higher; 24.5% conservative, 28.3% moderate, 47.2% liberal), and opinion on Brexit (28.3% wanted the UK to leave the EU, the remainder wanted the UK to stay or were not sure).

The analysis (see Table 3 for coefficients and standard errors) reveals several interesting predictors of PrEP support. First, older respondents in our sample are less supportive of funding PrEP. Those who identify as something other than heterosexual (gay or other) are more predictive of funding PrEP—this makes sense, as they are one population which could particularly benefit from the drug. Finally, both political variables are significant: those who consider themselves more politically liberal are more likely to support public PrEP funding, whereas those who preferred that the UK leave the EU are significantly less supportive. It is worth noting that despite these significant predictors, the overall model explains only about 11% of the variance in PrEP support, suggesting there is a great deal we do not know about what predicts support.

## Discussion

Despite strong empirical and theoretical bases for expecting that the public would view and thus support government-provisioned PrEP differently based upon the perceived beneficiary, our survey experiment found no statistically significant variation across the treatments. In fact, public support for NHS provision of PrEP is quite high across all treatments of the survey experiment, regardless of perceived sexual identity or sexual behavior. To understand this finding and guide future social policy research, we posit four potential explanations.

First, high public support for government-provisioned PrEP could be due to strong reverence for the NHS generally. Surveys of the British public show a large majority strongly believe the government has a responsibility to provide healthcare and that the NHS should be the one number priority for government expenditures (NCSR, 2017). The popularity of the NHS in British society goes beyond what the institution does, and centers around what it is seen to represent: national values of social equity and collective compassion (Klein, 1985; Whiteley, 1981). The belief that the NHS embodies such values might make it difficult to reconcile denying anyone access to treatment, including groups around which one holds pre-existing sexual stigma. However, reverence can cut the other way: tapping into these feelings, recent political debates have stressed the need to preserve and protect the NHS through more careful expenditure decisions in the context of scarce funds (Cairns, 2016; Duffy, 2016; Ridley, 2016).

Second, the finding could indicate that public opinion is not moved by responsibilization narratives, possibly as a result of counterflows of information exerting greater influence in the media environment (Zaller, 1992). A 2017 study on low-income benefits shows that arguments focusing on "lifestyle" and personal responsibility did not always resonate with the British public (O'Grady, 2017). Furthermore, recent surveys suggest the British public is becoming more socially liberal on matters of same-sex relationships and pre-marital sex (NCSR, 2017), with a more laissez-faire view of other people's lifestyles (NCSR, 2013). These attitude shifts might carry over to health policy, where baseline public opinion might be more impervious to normative lifestyle-based arguments than is generally assumed—a hypothesis we explore in depth elsewhere (Hildebrandt, Bode, & Ng, 2019). However, other polling somewhat undercuts this explanation. A 2015 UK survey on the use of "sin taxes" to encourage healthier lifestyles found a large majority of respondents agreed that "individuals should be responsible for their own lifestyle choices" (Snowdon, 2015). Although a large majority of the British public still believes healthcare should be the responsibility of government, this number has fallen dramatically in the last 5 years (NCSR, 2017), suggesting a growing perception that government's role in healthcare should be weighed against personal responsibility.

Third, public support for PrEP may not be representative of broader attitudes toward government expenditures on healthcare, but instead unique to HIV, for a few reasons. Targeted messaging by AIDS service organizations like Terrence Higgins Trust—and discussion of PrEP in social media—might have increased resistance to negative media coverage and driven up support for government provision of the drug. Moreover, the public remains very sympathetic toward people with HIV (NAT, 2014), due in part to the (mis)perception that their lives are "short, sad, and lonely" (Rochkind et al., 2009). Sympathy might drive the social desire to prevent this "fate" where possible in those most vulnerable; as shown elsewhere, sympathy can outweigh sexual

**Table 3** Ordinary least squares predicting PrEP support among all respondents

| Variable | *B* (SE) |
|---|---|
| Female | 0.03 (0.08) |
| White | 0.02 (0.12) |
| Age | − 0.14 (0.03)* |
| Gay | 0.44 (0.14)* |
| Liberal | 0.12 (0.03)* |
| Brexit leave | − 0.20 (0.09)* |
| Adjusted $R^2$ | 0.11 |

*indicates $p < 0.05$

stigma about how one's "irresponsible" lifestyle and behavior led to their infection (Farhat, Greene, Paige, Koblin, & Frye, 2017; Pachankis et al., 2018). Support may also be driven out of one's fear of becoming infected themselves. As accounts of the AIDS crisis illustrate (Shilts, 1987), significant public concern only emerged once it was understood to be a transmissible virus that could affect everyone, not just stigmatized subpopulations. Rochkind et al. (2009) show that this fear of HIV continues to drive people to take overly cautious measures to protect themselves against HIV infection despite understanding that these measures are irrational. Knowing that HIV is communicable, and still linking it with historically embedded misunderstandings of HIV as a "death sentence" (EKOS, 2012), individuals may support PrEP out of concerns for self-preservation.

Finally, the explanation may be methodological in nature. It is possible that our treatments were too weak to elicit reactions from the participants. The changes in each condition were small, and were not repeated, so the lack of difference we see between conditions could be due to this, rather than any of the previous explanations we offer.

Explanations aside, some degree of caution is needed in interpreting our findings. In general, the extent to which surveys can capture a real, substantial collective public opinion is unclear (Page, 1994). Even identically worded survey questions can yield varied responses depending upon context and be primed by changing media coverage (Judge & Solomon, 1993). Our sample is also skewed in that it is more female and younger than the UK population as a whole. Given that young people and women tend to be more sexually liberal as a general rule (though it is worth noting that a slim majority of our respondents identify as moderate or conservative), this could meaningfully change the overall level of support for PrEP. However, it should not affect our findings from the experiment itself as both age and gender are evenly distributed between all conditions (breakdowns of gender and age by condition are available in the online appendix).

We also acknowledge that public opinion can be fickle (Pawson & Wong, 2013). Our survey data reveal public opinion in a particular moment in time; attitudes on government-funded PrEP have likely shifted since the survey was conducted. But we do not believe this diminishes the value of our results. Quite the opposite. The particular moment in time captured in our survey actually strengthens our findings: the survey was conducted in September 2016 during the most sustained and negative media coverage about PrEP in England before or since. Under these conditions, public support of NHS-provisioned PrEP should have been especially low and sensitive to prejudicial attitudes, but instead we found it to be both broad-based and quite high.

## Conclusion

Using the case of the 2016 NHSE decision against funding PrEP, we show how—contrary to expectations—sexual stigma against perceived beneficiaries, even in times of austerity, do not necessarily move public support for the government provision of healthcare interventions seen to benefit these groups. In fact, we find that regardless of the perceived sexual identity and sexual behavior of potential beneficiaries, government-funded PrEP is widely supported, once people know about it. Insofar as NHSE's decision to not provide PrEP widely was due to concerns of controversy or low public support, such fears were unfounded. This is a startling finding for which we offered four possible explanations: denying treatment to any group runs counter to the values of the NHS, a revered social institution; public opinion is resilient to responsibilization arguments; public support for PrEP is unique to HIV rather than illustrative of a larger shift in public attitudes to government health expenditures; and the experiment was not strong enough to induce attitude shifts.

Importantly, this finding suggests policymakers may have misjudged how the general public would perceive government-provisioned PrEP. Moreover, such broad-based high support for the drug might make it more difficult for NHSE to continue justifying not funding it. Recent developments have further increased pressure on NHSE to provide full access to PrEP: in Scotland and Wales, PrEP is already widely available on their respective NHS'; the World Health Organization recently declared the drug "essential" for addressing public health needs (WHO, 2017); and the UK High Court overturned the drug patent extension for Truvada, opening the door for generic versions of PrEP to be available in the UK at a fraction of the cost (NAT, 2018). NHSE's continued failure to provide even the inexpensive generic forms of PrEP 2 years after the patent expiration further underscores how debates over cost-rationing and zero-sum allocations of healthcare budgets are framed by the larger political economy of state-protected "big pharma."

In addition, this study has implications for how social welfare is delivered in times of cost-cutting: fears of public outcry over some government expenditures in times of austerity have compelled policymakers to contract out service delivery to the third sector around the world (Pownall, 2013). As in the case of PrEP in England, such arrangements can provide arms' length access to public services deemed too politically costly for the state, especially where these services are seen to benefit sexually stigmatized groups (Bütschi & Cattacin, 1995; Hildebrandt, 2013; Lune, 2002). Having lost their High Court case in 2016, NHSE opted to conduct another PrEP trial, arguing that issues regarding large-scale PrEP implementation are not sufficiently understood (Boseley, 2017). This second trial lasts until September 2020; initially enrolling 10,000 participants, it has been expanded to 26,000 places (Duffy, 2017; NHSE,

2019). But in keeping with Conservative Party-led plans to devolve responsibility for social services from centralized authorities to local communities (termed the "Big Society" under David Cameron's leadership), trial implementation was led by a charity, St Stephen's AIDS Trust. Just months into the trial, however, St Stephen's abruptly declared bankruptcy, jeopardizing PrEP access for thousands of participants (Bowden, 2018). Our findings show the political rationale for contracting out service provision to the third sector is sometimes not only flawed but unnecessary.

Ultimately, in countries where healthcare is publicly funded and increasingly cost-conscious, policy decisions will always be sensitive to public opinion. But too frequently, these decisions are based more on an anticipated public response, rather than surveys that actually measure public opinion (Page & Shapiro, 1983; Whiteley, 1981). In this study, we have measured public attitudes in one particular case where public support for healthcare expenditures should be low and the influence of sexual stigma on attitudes high—and find that the actual public opinion was quite different than anticipated. While we do not suggest that sexual stigma and responsibilization narratives do not matter at all—evidence has shown that such politically led discourses have indeed moved public opinion in Britain (Hoggett et al., 2013; O'Grady, 2017)—this study draws into question assumptions about their strength. On certain social policy issues such as health expenditures and even in times of austerity, public opinion may be more resilient to sexual stigma and responsibilization—an area which requires further exploration.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflicts of interest.

**Ethical Approval** The survey in this study involving human participants was conducted in accordance with the ethical standards of and received ethical approval from the London School of Economics and Political Science.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.



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