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Perceptions and Acceptability of Doxycycline-Based STI Prophylaxis: Insights from Consumers and Healthcare Providers in Queensland

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ABSTRACT

Objectives: This study examines the perceptions and acceptability of daily doxycycline-based prophylaxis (Doxy-PrEP) for bacterial sexually transmitted infections (STIs) among populations at heightened risk of STIs and healthcare providers in Queensland, Australia. It explores factors influencing willingness to use or prescribe this intervention, including potential ethical and clinical concerns.

Methods: Two cross-sectional online surveys were conducted in 2024 - one targeting consumers at higher risk for STIs, including gay, bisexual and other men who have sex with men, sex workers, young adults, culturally diverse people as well as Aboriginal and Torres Strait Islander Peoples (Indigenous Australians). The other survey targeted healthcare providers with prescribing rights. Recruitment was conducted via social media, community organizations and professional networks. Statistical analyses assessed demographic, behavioral and experiential predictors of Doxy-PrEP acceptability.

Results: Consumer perceptions of Doxy-PrEP were shaped by prior biomedical prevention use, particularly HIV PrEP, as well as age, with older participants expressing greater acceptance. Perceived STI risk and previous antibiotic use were also associated with willingness to use Doxy-PrEP. Ethical concerns focused on antibiotic resistance, reduced condom use, and healthcare burden. Among providers, awareness of Doxy-PEP was high, with most viewing it as an evidence-based practice. Support for Doxy-PrEP was more "conditional", with concerns about long-term antibiotic resistance and adherence.

Conclusions: Findings highlight complex social and clinical considerations in the potential implementation of Doxy-PrEP. While consumer interest suggests a role for this intervention in STI prevention, ethical concerns and provider hesitancy require clear guidelines, education, and regulatory oversight. Future research should examine long-term implications for antimicrobial resistance and STI prevention strategies.

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Doxycycline; sexual health; sexually transmittable infections; pre-exposure prophylaxis; patient acceptance of health care

Background and literature review

Notifications of bacterial sexually transmitted infections (STIs) continue to rise globally, with gonorrhea, syphilis, and chlamydia presenting significant public health challenges (Zheng et al., 2022). Despite advances in HIV prevention, such as pre-exposure prophylaxis (PrEP), similar progress has not been made for bacterial STIs, which continue to increase at a high rate. In Australia, between 2010 and 2019, national gonorrhea notifications rose by 196%, and syphilis cases by 378% (The Kirby Institute, 2020, 2023). These increases disproportionately affect young people, gay and bisexual men who have sex with men (GBMSM), Aboriginal and Torres Strait Islander Peoples (Indigenous Peoples of Australia), culturally and linguistically diverse (CALD) populations, and sex workers—which can be considered to be

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populations at higher risk for STIs. Current prevention strategies (e.g., condom use, regular STI screening, partner notification) have not sufficiently reduced transmission and condom use rates have decreased substantially since the introduction of HIV PrEP, particularly among gay men (Holt et al., 2018; Traeger et al., 2022), contributing to a rise in bacterial STIs. Declines in condom use have also been reported in young heterosexual couples as a result of advances in contraception (Steiner et al., 2021). As a result, researchers and clinicians continue to explore biomedical interventions, such as presumptive antibiotic treatment, to complement existing STI prevention approaches.

In this context, doxycycline has emerged as a potential STI prophylaxis option. Two major approaches to doxycycline prophylaxis have been studied to date: doxycycline post-exposure prophylaxis (Doxy-PEP), in which individuals take a 200 mg dose of doxycycline within 24 to 72 hours of potential STI exposure, and doxycycline pre-exposure prophylaxis (Doxy-PrEP), in which individuals take doxycycline regularly to prevent bacterial STIs. Clinical trials of Doxy-PEP demonstrating significant reductions in syphilis (70–80%) and chlamydia (70–90%), although its effectiveness against gonorrhea is inconsistent or limited due to existing tetracycline resistance[1] (ASHM, 2023b; Luetkemeyer et al., 2023; Molina et al., 2018). Presumptive antibiotic treatment, in which individuals at high risk receive antibiotics without a confirmed diagnosis, is already employed in some settings. An examples of these treatments include as expedited partner therapy where antibiotics are presumptively prescribed to partners of individuals diagnosed with STIs (McCool-Myers et al., 2021). Furthermore, population-based presumptive treatment has been trialed among sex workers in low- and middle-income countries, demonstrating success in reducing STI prevalence (Murray et al., 2010; Steen et al., 2012). Doxy-PrEP, the daily intake of 100mgs of doxycycline over longer periods of time, has been explored to a lesser extent but is conceptually similar to HIV PrEP, offering ongoing STI protection through regular antibiotic use rather than a reactive approach after sexual activity (Boschiero et al., 2025;; Werner et al., 2024). While the early evidence suggests potential benefits for reducing the incidence of bacterial STIs, both Doxy-PEP and Doxy-PrEP raise concerns, particularly regarding long-term antibiotic resistance, unintended health impacts and potential behavioral changes. However, it should be noted that some argue that these risks are overemphasized given a similar long-term use in the treatment of acne or malaria (Garcia-Iglesias et al., 2025).

In addition to reducing individual-level STI risk, the potential benefits of Doxy-PrEP extend to broader public health outcomes. Early data suggest that doxycycline-based prophylaxis can contribute to reduced prevalence of bacterial STIs, thus disrupting transmission chains in high-risk networks (Boschiero et al., 2025; Fredericksen et al., 2024). Beyond efficacy, it may lead to a heightened sense of agency, peace of mind and control over their sexual health, echoing earlier shifts seen with HIV PrEP. As with other biomedical interventions, Doxy-PrEP may not only provide clinical protection but also enhance sexual wellbeing and pleasure by reducing fear and anxiety associated with STI acquisition (Werner et al., 2024).

The success of HIV prevention through PrEP, particularly in GBMSM, has led to growing consideration of additional prophylactic tools in the sexual health sector. In GBMSM communities, the HIV/AIDS epidemic reshaped sexual behaviors and healthcare engagement, leading to community-driven responses to risk reduction and self-care (Crimp, 1987; Parker & Aggleton, 2007). HIV PrEP was seen as a transformative intervention, allowing individuals to reclaim aspects of sexual freedom that had been restricted by a persistent fear of HIV (González, 2019). As a result, PrEP has been described as more than just a biomedical tool; it has been linked to broader shifts in community norms around safer sex, intimacy and stigma reduction (Brisson & Nguyen, 2017). However, the implementation of HIV PrEP has also revealed tensions, with some users reporting stigma from within their communities or facing concerns about potential behavioral disinhibition, particularly at the beginning of the roll-out of PrEP (Holt et al., 2016; Koppe et al., 2021).

Similar questions arise with the potential introduction of Doxy-PrEP for bacterial STIs. This approach may have the potential to reduce STI transmission and offer individuals more control over their sexual health much like HIV PrEP, although to a different degree given the arguably

higher impact of HIV when compared to bacterial STIs. However, its widespread adoption could alter perceptions of STI risk, potentially leading to further reductions in condom use. The experiences made with HIV PrEP suggests that biomedical interventions do not exist in isolation and become embedded in broader social and community narratives, influencing how they are used, and accepted or resisted (Kippax, 2012). While Doxy-PrEP could provide a valuable contemporary tool in STI prevention, its long-term social and behavioral impacts remain largely unknown.

Recent research suggests that Doxy-PEP as well as Doxy-PrEP is used informally and unapproved, by some high-risk communities, as noted above. A cross-sectional online survey conducted in Spain found that more than half (54.6%) of GBMSM surveyed had taken doxycycline, with 35.4% using it as Doxy-PEP and 8.5% as Doxy-PrEP (Villanueva Baselga et al., 2025). Many participants obtained the medication without formal prescriptions, through leftover treatments, self-medication or online purchases. Similar trends have been reported in Germany, the Netherlands, and the United States, where some GBMSM community members have incorporated Doxy-PEP into their STI prevention strategies outside regulated clinical pathways (Cornelisse et al., 2024; Evers et al., 2020). This potentially raises concerns regarding unregulated antibiotic use, self-dosing without medical supervision and the potential for incorrect or inconsistent adherence to recommended regimens. While early data suggest that Doxy-PEP is and Doxy-PrEP may be effective in reducing the incidence of bacterial STIs, the absence of formal oversight, particularly around Doxy-PrEP, increases the risk of misuse and complicates efforts to track long-term effects on antibiotic resistance and individual health outcomes.

In 2023, the Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine (ASHM) held a national roundtable to evaluate Doxy-PEP (ASHM, 2023a). The consensus statement recognized that Doxy-PEP could be beneficial for individuals with recurrent bacterial STIs, particularly in preventing syphilis among GBMSM. However, concerns were raised about antimicrobial resistance, microbiome disruptions and behavioral changes (e.g., reduced condom use). The roundtable discussions emphasized the need for clear guidelines to balance individual benefits with community-level harms. It is important to note that this statement focused on Doxy-PEP and did not address the use of Doxy-PrEP, leaving questions about its potential implementation and implications.

Given the emerging role of Doxy-PEP and Doxy-PrEP, the current study aims to investigate perceptions and acceptability of Doxy-PrEP for bacterial STIs among both populations at heightened risk of STIs and healthcare providers in Queensland. A clearly specified and well-defined geographical focus is relevant in this context, as STI prevalence, healthcare access, prescribing practices, and community attitudes can vary significantly across different regions, influencing the feasibility and impact of implementing Doxy-PrEP as public health interventions and associated health inequalities. Understanding willingness to use, barriers to uptake, and clinical concerns will be critical for informing future public health strategies. As such, this study was designed and conducted to assess the acceptability and feasibility of a population health intervention approach to subscribing and adhering to a doxycycline-based prophylaxis among demographic groups susceptible to repeat tests and prescriptions for a range of STIs. These groups were selected based on evidence demonstrating that they were the most likely to attend clinics and require repeat treatment after sexual intercourse without condom use. These groups included sex workers, GBMSM groups, young heterosexuals, and Indigenous Australians in the state of Queensland, Australia. While a systematic review published earlier clearly established the need for this research, no other research has since been undertaken to assess whether a medical and pharmaceutical intervention would benefit populations at high risk for STIs in Australia (Carroll et al., 2025).

Methods

Participants and recruitment

Two cross-sectional online surveys examined perceptions of presumptive antibiotic treatment for bacterial STIs in (I) consumers and (II)

providers, with data being collected in 2024. The consumer survey targeted populations at high risk for STIs in the Australian, including GBMSM, culturally and linguistically diverse people (CALD), young adults (defined as those aged between 18–29 years), sex workers and Aboriginal and Torres Strait Islander peoples. Aboriginal and Torres Strait Islander are the Indigenous Peoples of Australia. Aboriginal Peoples are the original inhabitants of mainland Australia and most of its islands, while Torres Strait Islander Peoples are from the Torres Strait Islands between the northern tip of Queensland and Papua New Guinea, with distinct cultural and historical identities. As of the 2021 Australian Census, among the 983,700 people who identified as Aboriginal and/or Torres Strait Islander, 91.7% identified as Aboriginal, 4.0% as Torres Strait Islander, and 4.3% as both (Australian Bureau of Statistics, 2023).

The provider survey included healthcare providers in Queensland with prescribing rights for antibiotics, primarily physicians and nurses. In Queensland, registered nurses can prescribe and administer certain antibiotics for STIs under an Extended Practice Authority for Sexual and Reproductive Health Services (Queensland Health, 2024).

Participants in the consumer survey were recruited through social media platforms (Facebook, Instagram, and geo-social networking platform Grindr), and via community organizations and health services that work with these populations. Recruitment materials included digital and physical posters distributed through relevant networks, with a QR code linking to the online survey. The provider survey was disseminated through professional associations (e.g., Australian Medical Association), mailing lists, and direct invitations to clinicians working in sexual health and related fields. To be eligible for the consumer survey, participants had to be at least 18 years old, reside in Queensland and belong to at least one of the priority populations listed above for the consumer survey or a health practitioner with prescribing rights for antibiotics for the provider survey.

The study received primary ethics approval from the Queensland University of Technology Human Research Ethics Committee (Approval number: 7759). Administrative approval was subsequently provided by University of Technology Sydney and the University of Southern Queensland.

Community involvement and research team expertise

The study was developed and co-designed in collaboration with community organizations to ensure alignment with their priorities and relevance to their communities. Their involvement helped refine survey content, recruitment strategies as well as the framing of key questions to ensure cultural safety and appropriateness. This collaborative approach included staff members from national organizations working in this field, such as ASHM. Additionally, the research team worked closely with 2Spirits, a program led by Queensland Council for LGBTI Health, which focuses on the health and wellbeing of Aboriginal and Torres Strait Islander LGBTIQ+ Sistergirl and Brotherboy communities. Their expertise ensured that the study was informed by culturally specific perspectives and addressed the unique needs of these communities in a respectful and meaningful way.

The research team is comprised of experienced researchers with a diverse and relevant range of expertise aligned with both the topic and communities studied. This included extensive knowledge in LGBTQ+ health (DD, AM), epidemiology and biostatistics (DD, PB), sexual and reproductive health (all authors), and clinical and health psychology (AM). A strong understanding of Indigenous health and cultural safety in healthcare informed the study, with contributions from two Indigenous coauthors including a social worker and associate lecturer in Indigenous health and wellbeing (JM) and an experienced pharmacist (FM).

Variables

Consumer survey

Consumer participants were asked a range of questions in their survey across the following domains:

1. Demographics: Age, gender identity and sex recorded at birth, sexual orientation, Aboriginal and/or Torres Strait Islander status, cultural background, education level, employment and history of sex work. These variables allow for the exploration of differences in attitudes across relevant subgroups.
2. HIV PrEP Knowledge and Use: Awareness, prior use, willingness to use, and access to PrEP were assessed, given its conceptual similarity to presumptive antibiotic treatment for STIs. These measures were included based on prior research indicating that experiences with PrEP may influence attitudes toward other prophylactic treatments (see literature review). Questions around willingness to use were based on previous research (Okeke et al., 2021).
3. Sexual Health Behaviors: STI testing history, past diagnoses of STIs, perceived risk of STI acquisition, and healthcare service engagement. These variables were included to assess whether past health behaviors were associated with perceptions of presumptive antibiotic treatment.
4. Antibiotic Knowledge and Use: Previous antibiotic prescriptions, understanding of antibiotic resistance, and attitudes toward antibiotic stewardship. Questions were adapted from validated antibiotic knowledge scales (Effah et al., 2020).
5. Attitudes Toward Presumptive Antibiotic Treatment: Participants were presented with a vignette in form of a case study (see Appendix 1) describing presumptive antibiotic use for STIs and asked to rate its appropriateness, consistency with perceived risk, and potential ethical concerns. These items were designed to assess acceptability and concerns related to antibiotic resistance, behavioral changes (e.g., anticipated reduced condom use) and healthcare burden. The vignette existed in different varieties with names, gender and sexual orientation being adjusted to match the participant. This approach was used to reduce bias and enhance participant engagement by ensuring that the vignette is personally relevant and relatable. Personalization of vignettes has been shown to improve response accuracy as well as reducing social desirability bias, particularly in areas perceived as 'sensitive' such as sexual and reproductive health (Hughes & Huby, Hughes & Huby, 2012).

Provider survey

Providers were asked questions across the following three domains:

1. Demographics: Profession, years of clinical experience, specialty area (e.g., general practice, sexual health, public health) and gender identity. Participants were also asked if they had S100 prescribing authority. Section 100 (S100) of the National Health Act (Australia) enables eligible medical practitioners to prescribe specific highly specialized drugs, such as antiretrovirals for HIV and treatments for Hepatitis B, under the Pharmaceutical Benefits Scheme (PBS).
2. Clinical Experience with STIs and Antibiotic Use: Frequency of STI diagnoses and treatments, familiarity with antibiotic resistance and adherence to STI treatment guidelines.
3. Attitudes Toward Presumptive Antibiotic Treatment: Providers were asked about their willingness to prescribe presumptive antibiotics, perceived benefits and risks, and concerns regarding antibiotic resistance and patient adherence.

Statistical analyses

All analyses were conducted using IBM SPSS Statistics Version 28. Descriptive statistics were used to summarize sample characteristics and key variables. Group differences were assessed using chi-square tests for categorical variables and independent samples t-tests or Mann-Whitney U tests for continuous variables, as relevant. All statistical tests were two-tailed, with significance set at $p < .05$.

In the consumer survey, univariable analyses explored associations between key independent variables (e.g., demographics, STI history, PrEP use) and three dependent variables related to the vignette case study:

1. Perceived appropriateness of presumptive antibiotic treatment
2. Consistency with perceived STI risk
3. Belief that better treatment options exist

Ordinal regression models were used to examine predictors of these dependent variables, with analyses conducted using the PLUM procedure with a logit link function. The models assessed factors such as age, PrEP use history, frequency of antibiotic prescriptions and recent sexual health service engagement. Results were reported as odds ratios with 95% confidence intervals. Model fit was evaluated using Pearson's chi-square goodness-of-fit tests and pseudo R^2 values (Cox & Snell, Nagelkerke). This approach accounts for the ordered nature of the dependent variables while avoiding assumptions of spacing between response categories. Given the distribution and structure of the outcome variables, ordinal regression provided a robust method for capturing nuanced differences in acceptability and intention across groups. All statistical analyses were discussed with an in-house biostatistician.

Consumers had the option to provide a free-text responses regarding ethical and moral concerns. These were thematically analyzed to identify key themes, including antibiotic resistance, anticipated behavioral changes such as reduced condom use, and healthcare burden. A full qualitative analysis was not conducted, as the survey design and data collection methods were primarily quantitative, and the open-ended responses were brief and often lacked the depth required for rigorous qualitative coding. Furthermore, the topic was already provided, limiting the response to a pre-defined narrow area. As a result, a descriptive thematic approach was used to summarize common concerns expressed by participants.

Results

Consumer perspectives

Sample characteristics

A total of 310 people started the survey, consented and were eligible, of these 60 did not provide data on at least one key variable (age, gender, place of living) and were excluded leading to a final sample size of 250. The sample demographics are presented in Table 1. The mean age was 31.8 years (SD = 12.6), ranging from 18 to 76 years. Young people aged 18 to 29 made up 30.0% (n = 75) of the sample. The sample was predominantly male (78.4%, n = 196) and the majority of participants were born in Australia (72.8%, n = 182), and 74.0% (n = 185) identified as gay. Aboriginal and/or Torres Strait Islander participants represented 7.2% of the sample, with 4.8% identifying as Aboriginal and 2.4% as Torres Strait Islander. In terms of education, 26.0% (n = 65) held a postgraduate degree, while 3.6% (n = 9) had not completed high school. Additionally, 12.4% (n = 31) participants reported having had ever worked as a sex worker.

HIV PrEP knowledge and usage

Among participants, 90.4% (n = 226) reported being aware of HIV PrEP, and 48.8% (n = 122)

Table 1. Sample characteristics.

Age		M = 31.8 (SD = 12.6)
Place of Birth	Australia	72.8% (n = 182)
	Other country	27.2% (n = 68)
Gender	Male	78.4% (n = 196)
	Female	17.2% (n = 43)
	Non-Binary	3.2% (n = 8)
Aboriginal and/or Torres Strait Islander Origin	No	92.8% (n = 232)
	Aboriginal	4.8% (n = 12)
	Torres Strait Islander	2.4% (n = 6)
Total GBMSM		74.0% (n = 185)
Sexual Orientation	Straight/Heterosexual	13.6% (n = 34)
	Gay/Lesbian	59.2% (n = 148)
	Bisexual	22.8% (n = 57)
	Any other	4.4% (n = 11)
Highest Level of Education	Postgraduate Degree	26.0% (n = 65)
	Undergraduate Degree	24.0% (n = 85)
	Certificate/Diploma	22.4% (n = 56)
	High school (completed)	14.0% (n = 35)
	High school (incomplete)	3.6% (n = 9)
Ever worked as a sex worker		12.4% (n = 31)

Table 2. Sexual health behaviors, perceptions and health services use.

Ever tested for any STI (yes)		92.4% (n = 231)
Tested for any STI past year (yes)		79.1% (n = 52)
Ever diagnosed with any STI (yes)		61.6% (n = 154)
Ever diagnosed with a bacterial STI[a] (yes)		56.4% (n = 141)
Diagnosed with more than one bacterial STI[a] (yes)		38.0% (n = 95)
Perceived likelihood to get an STI in the next 12 months	Extremely likely	8.0% (n = 20)
	Likely	27.6% (n = 69)
	Neither likely nor unlikely	28.4% (n = 71)
	Unlikely	30.8% (n = 77)
	Never/impossible	5.2% (n = 13)
Had a symptom of a potential STI in past 12 months	Yes	30.8% (n = 77)
	Sought medical care for symptoms	90.9% (n = 70)

[a]Syphilis, gonnorrhoea or chlamydia.

had used it in the past six months. For those who had not used HIV PrEP, 28.0% (n = 70) were willing to use it daily, and 35.2% (n = 88) were willing to use it on-demand; however, 54.8% (n = 57) did not know how to access HIV PrEP. Among recent HIV PrEP users, 61.5% (n = 75) used it daily or almost daily, while 32.8% (n = 40) used it on-demand and 5.7% (n = 7) used it daily for a limited time.

Sexual health behaviors and health service use

Sexual health behaviors and perceptions are detailed in Table 2. A high proportion of participants (92.4%, n = 231) had undergone STI testing in their lifetime with 79.1% (n = 52) being tested within the past year. An STI diagnosis within their lifetime was reported by 61.6% (n = 154), and 56.4% (n = 141) had been diagnosed with a bacterial STI, of whom 38.0% (n = 95) reported multiple bacterial infections. Concerning the perceived likelihood of acquiring an STI, 8.0% (n = 20) considered it extremely likely, while 30.8% (n = 77) considered it unlikely. Among those reporting STI symptoms in the past year (30.8%, n = 77), 90.9% (n = 70) had sought medical care.

Antibiotic usage

Almost all participants (96.0%, n = 240) had used antibiotics at some point in their life. In the past year, 31.6% (n = 79) did not receive any antibiotic prescriptions, while 34.0% (n = 85) received one antibiotic prescription, 20.8% (n = 52) received two and 3.6% (n = 9) received three prescriptions. A small proportion (6.0%, n = 15) received more than three prescriptions.

Relationships between variables

The univariable analyses (see Table 3) examined the relationships between independent variables and three dependent variables: the appropriateness of Doxy-PrEP, its consistency with perceived risk, and the availability of better treatment options. Several independent variables, including Indigenous status, sexual orientation, education level, perceived risk of future STIs, and engagement in sex work, did not show significant relationships with any dependent variable (all $p > .05$). This indicates that these factors were not significant predictors of participants' perceptions of Doxy-PrEP in this analysis.

Age was a consistent predictor across all three dependent variables. Older participants were more likely to perceive Doxy-PrEP as appropriate ($rs = .201$, $p = .002$) and consistent with perceived risk ($rs = .155$, $p = .020$). Similarly, older participants were less likely to agree that better treatment options are available ($rs = -.229$, $p < .001$). History of PrEP use also showed significant associations with participants who had not used PrEP in the past six months being more likely to disagree with Doxy-PrEP's appropriateness ($\chi^2(1) = 4.546$, $p = .033$) and its consistency with risk ($\chi^2(1) = 4.143$, $p = .042$). These participants had lower mean ranks for agreement compared to those who used PrEP recently (appropriateness: 93.8 vs. 111.0; consistency: 94.3 vs. 111.6). However, when considering the availability of better treatment options, non-PrEP users were more likely to agree ($\chi^2(1) = 9.571$, $p = .002$), with a higher mean rank of 117.5 compared to 92.7 among PrEP users.

The frequency of antibiotic prescriptions was positively correlated with perceptions of Doxy-PrEP's appropriateness ($rs = .185$, $p = .006$).

Table 3. Univariate analysis.

Dependent Variable	Appropriateness of Doxy-PrEP	Consistency with Risk in Case Study	Availability of Better Treatment Options
Age	$r_s(226) = .201$, $p = .002$ Those who disagree tend to be younger, those who agree tend to be older.	$r_s(226) = .155$, $p = .020$ Those who disagree tend to be younger, those who agree tend to be older.	$r_s(226) = -.229$, $p = <.001$ Those who agree tend to be younger, those who disagree tend to be older.
Level of Education	$r_s(226) = -.092$, $p = .170$	$r_s(226) = .002$, $p = .982$	$r_s(226) = .075$, $p = .263$
Frequency of Antibiotic Prescriptions (past year)	$r_s(222) = .185$, $p = .006$	$r_s(222) = .065$, $p = .333$	$r_s(222) = -.068$, $p = .315$
Perceived to be at Risk of Future STI	$r_s(226) = .106$, $p = .112$	$r_s(226) = .122$, $p = .067$	$r_s(226) = -.076$, $p = .256$
Born in Australia	$\chi^2(1) = 1.015$, $p = .314$	$\chi^2(1) = 2.233$, $p = .135$	$\chi^2(1) = .853$, $p = .356$
Gender	$\chi^2(2) = .775$, $p = .679$	$\chi^2(2) = .817$, $p = .665$	$\chi^2(2) = 6.096$, $p = .047$ Man had a significantly lower mean rank (107.2) than women (132.5) and non-binary participants (129.9) indicating that they are more likely to disagree with this statement.
Indigenous Status	$\chi^2(2) = 1.356$, $p = .508$	$\chi^2(2) = 2.791$, $p = .248$	$\chi^2(2) = .181$, $p = .913$
History of PrEP Use	$\chi^2(1) = 4.546$, $p = .033$ Those who did not use PrEP were more likely to disagree with this statement with a mean ran of 93.8 compared to 111.0.	$\chi^2(1) = 4.143$, $p = .042$ Those who did not use PrEP were more likely to disagree with this statement with a mean ran of 94.3 compared to 111.6.	$\chi^2(1) = 9.571$, $p = .002$ Those who did not use PrEP were more likely to agree with this statement with a mean ran of 117.5 compared to 92.7.
Sexual Orientation	$\chi^2(3) = 4.693$, $p = .196$	$\chi^2(3) = 4.978$, $p = .173$	$\chi^2(3) = 6.625$, $p = .085$
Ever Diagnosed with an STI	$\chi^2(1) = .035$, $p = .851$	$\chi^2(1) = .001$, $p = .980$	$\chi^2(1) = 2.803$, $p = .094$
Recent Use of Sexual Health Service (past year)	$\chi^2(1) = 4.338$, $p = .037$ Those who did not use sexual health services were more likely to disagree with this statement with a mean ran of 94.8 compared to 112.1.	$\chi^2(1) = 1.586$, $p = .208$	$\chi^2(1) = 2.529$, $p = .112$
Ever Engaged in Sex Work	$\chi^2(1) = 3.812$, $p = .051$	$\chi^2(1) = 1.198$, $p = .274$	$\chi^2(1) = 1.238$, $p = .266$

Gender differences were significant only for perceptions of better treatment options ($\chi^2(2) = 6.096$, p = .047), with men being less likely to agree compared to women and non-binary participants. Lastly, participants who had used sexual health services in the past year were more likely to view Doxy-PrEP as appropriate ($\chi^2(1) = 4.338$, p = .037), as evidenced by their higher mean ranks (112.1 vs. 94.8 for those who did not access services).

Ordinal regressions

An overview of three ordinal regression models conducted can be found in Table 4. Model 1 focuses on participants' perceptions of whether Doxy-PrEP is appropriate as a treatment option. Model 2 examines the perception of Doxy-PrEP as being consistent with the reported or perceived risk in a case study. Model 3 assesses agreement with the statement that better treatment options than Doxy-PrEP are available. For clarity, these models are numbered but represent separate analyses rather than incremental adjustments of the same regression model.

Model 1: appropriateness of doxy-PrEP. The first model significantly improved fit over an intercept-only model, $\chi^2(19) = 28.86$, $p = .025$. Goodness-of-fit statistics suggested adequate model fit, with Pearson's $\chi^2(724) = 767.56$, $p = .127$. Pseudo R-squared values were modest (Cox & Snell $R^2 = .142$, Nagelkerke $R^2 = .150$).

Significant predictors included age ($B = .042$, SE = .012, Wald $\chi^2(1) = 11.91$, $p < .001$) and recent PrEP use ($B = .362$, SE = .136, Wald $\chi^2(1) = 7.07$, $p = .008$). Older participants were more likely to view Doxy-PrEP as an appropriate treatment option, as were those who had recently used PrEP. Education level showed a trend toward significance ($B = -.225$, SE = .135, Wald $\chi^2(1) = 2.77$, $p = .096$). Other variables, including gender identity, sexual orientation, Indigenous status, and STI diagnosis, were not significant.

Model 2: risk-appropriate treatment. The second model assessed perceptions that Doxy-PrEP is consistent with the risk reported in a case study. The model significantly improved over the intercept-only model, $\chi^2(18) = 28.45$, $p = .045$. Goodness-of-fit statistics suggested an adequate fit (Pearson's $\chi^2(721) = 742.50$, $p = .140$). Pseudo R-squared values were modest (Cox & Snell $R^2 = .149$, Nagelkerke $R^2 = .157$).

Key predictors included gender identity and Indigenous status. Male participants were more likely to agree that Doxy-PrEP aligns with the reported risk ($B = 1.217$, SE = .557, Wald $\chi^2(1) = 4.78$, $p = .029$). Aboriginal participants showed a trend toward lower agreement compared to non-Indigenous participants ($B = -.649$, SE = .360, Wald $\chi^2(1) = 3.25$, $p = .071$), though this was not statistically significant. Other variables, such as age, education, recent PrEP use, and STI diagnosis, did not significantly influence perceptions in this model.

Model 3: availability of better treatment options. The third model explored agreement with the statement that better treatment options than Doxy-PrEP are available. This model significantly improved over the intercept-only model, $\chi^2(16) = 34.59$, $p = .005$. Goodness-of-fit statistics suggested an adequate fit, with Pearson's $\chi^2(724) = 714.77$, $p = .589$. Pseudo R-squared values were Cox & Snell $R^2 = .168$, Nagelkerke $R^2 = .178$.

Significant predictors included age ($B = -.046$, SE = .012, Wald $\chi^2(1) = 14.29$, $p < .001$), with older participants less likely to agree that better options are available. No other variables were significant in this model, including gender identity, Indigenous status, sexual orientation, recent PrEP use, and education level.

Ethical and moral consequences

The final question for participants was about potential ethical and moral consequences of engaging in Doxy-PrEP treatment with 27.7% (n = 62) either agreeing or strongly agreeing that there are such consequences with 16.5% (n = 37) having no opinion and 55.8% (n = 125) disagreeing or strongly disagreeing. Those who agreed that there are moral and/or ethical consequences were provided with an opportunity to provide further context in a free-text field with 53 participants providing further context (representing 85.5% of all participants who agreed that there are moral and/or ethical consequences).

Table 4. Ordinal regression.

		Model 1	Model 2	Model 3
Dependent Variable		Appropriateness of Doxy-PEP	Consistency with Risk in Case Study	Availability of Better Treatment Options
Model Fit		$\chi^2(16) = 28.859$, $p = .025$	$\chi^2(18) = 28.45$, $p = .045$	$\chi^2(16) = 34.592$, $p = .005$
Pseudo R-squared (Nagelkerke)		.150	.157	.178
Age[a]		.042 (.018 − .066); p < .001	.037 (.013 − .060; p = .002	−.046 (−.070 - −.022); p < .001
Level of Education[a]		−.225 (−.489 − .040); p = .096	.036 (−.226 − .298; p = .787	.050 (−.212 − .2312); p = .707
Frequency of Antibiotic Prescriptions (past year)[a]		.362 (.095 − .627); p = .008	.117 (−.143 − .376; p = .379	−.099 (−.357 − .159); p = .452
Perceived to be at Risk of Future STI[a]		.113 (−.203 − .429); p = .483	.150 (−.165 − .465; p = .875	−.093 (−.407 − .222); p = .563)
Born in Australia	Yes	.003 (−.620 − .627); p = .991	.418 (−.207 − 1.043; p = .190	−.286 (−.912 − .341); p = .371
	No	Ref	Ref	Ref
Gender	Non-Binary	.302 (−1.220 − 1.824); p = .697	−.006 (−1.525 − 1.513; p = .994	−.347 (−1.884 − 1.191); p = .659
	Female	.785 (−.296 − 1.866); p = .155	1.217(−.126 − 2.309); p = .029	−.704 (−1-782 − .375); p = .201
	Male	Ref	Ref	Ref
Indigenous	No	.450 (1.419 − 2.320); p = .637	.718 (−1.137 − 2.573); p = .448	−.329 (−2.207 − 1.548); p = .731
	Aboriginal	.713 (−1.527 − 2.952); p = .533	1.086 (−1.135 − 3.308); p = .338	.967 (−1.263 − 3.198); p = .4395
	Torres Strait Islander	Ref	Ref	Ref
History of PrEP Use	Yes	.458 (−.268 − 1-185); p = .216	.496 (−.232 − 1.223); p = .181	−.590 (−1.322 − .142); p = .114
	No	Ref	Ref	Ref
Sexual Orientation	Any Other	−.809 (−2.516 − .899); p = .353	−.691 (−2.399 − 1.016); p = .427	.456 (−1.271 − 2.183); p = .605
	Bisexual	.172 (−1.021 − 1.364); p = .778	.754 (−.444 − 1.952); p = .217	.098 (−1.103 − 1.299); p = .873
	Gay/Lesbian	.236 (−1.049 − 1.521); p = .719	.739 (−.550 − 2.029); p = .261	−.432 (−1.726 − .861); p = .513
	Straight (Heterosexual)	Ref	Ref	Ref
Ever Diagnosed with an STI	Yes	−.879 (−1.591 - −.168); p = .015	−.649 (−1.355 − .056); p = .071	−.050 (−.748 − .648); p = .888
	No/Unsure	Ref	Ref	Ref
Recent Use of Sexual Health	Yes	.111 (−.523 − .745); p = .732	.011 (−.625 − .646); p = .974	−.162 (−.800 − .476); p = .619
Service (past year)	No	Ref	Ref	Ref
Ever Engaged in Sex Work	Yes	.176 (−.683 − 1.035); p = .688	.004 (−.847 − .856); p = .992	−.454 (−1.306 − .398); p = .296
	No	Ref	Ref	Ref

[a]Treated as a continuous variable.

The most frequently cited concern was a perceived risk of antibiotic resistance, with many participants feeling that a widespread prophylactic use of antibiotics could increase resistance, subsequently limiting treatment options and efficacy for bacterial infections. Some participants also raised concerns about the ethical responsibility of individuals, arguing that STI prevention should prioritize safer sex practices over pharmaceutical interventions. A subset of respondents linked this to behavioral changes, suggesting that increased access to antibiotics could further reduce condom use and, in turn, make the problem 'worse'. Participants also highlighted broader ethical and healthcare system concerns, including the moral obligations of doctors prescribing prophylactic antibiotics and the potential burden on healthcare resources. Several responses referenced side effects associated with long-term antibiotic use such as gut microbiome disruption and liver health risks.

Provider perspectives

Sample characteristics

Thirty-seven medical professionals participated in the survey. The majority were physicians (86.5%, n = 32), with the remaining 13.5% (n = 5) being nurses. General practice was the most common specialization (67.6%, n = 25), followed by sexual health (37.8%, n = 14), obstetrics and gynecology (5.4%, n = 2), public health (5.4%, n = 2), and addiction medicine (2.7%, n = 1). Most participants identified as male (78.4%, n = 29), while 21.6% (n = 8) identified as female; none of the providers identified as non-binary.

Among participants, 67.6% (n = 25) reported working in a specialized sexual health setting and 78.4% (n = 29) discussed sexual health and well-being with patients on a daily or near-daily basis. More than half (51.4%, n = 19) were accredited as HIV or Hepatitis B S100 prescribers. The majority of providers had been practising in their field for five or more years (81.1%, n = 30) and 38.9% (n = 14) had been in their current role for five to ten years.

STI management and preventative prescribing

Nearly all respondents (97.3%, n = 36) had prescribed antibiotics for a laboratory-confirmed bacterial STIs in the past year, while 88.9% (n = 32) had prescribed antibiotics for suspected but unconfirmed cases (syndromic case management). Awareness of HIV PrEP was high, with 69.4% (n = 25) having prescribed it in the past year. Similarly, 43.2% (n = 16) had prescribed HIV PEP at some point, with 43.2% (n = 16) having done so in the last 12 months.

Perceptions of Doxy-PEP and Doxy-PrEP

Most participants (75.0%, n = 27) had heard of Doxy-PEP and with 30.6% (n = 11) having prescribed it in the past year. Among those familiar with Doxy-PEP, 72.2% (n = 26) considered it an evidence-based practice, and 72.2% (n = 26) stated that their support for Doxy-PEP would increase if it received 'official endorsement'. Qualitative feedback in this instance questioned what 'official endorsement' is given that there is an ASHM Consensus Position Statement from 2023 specifically endorsing this type of treatment.

Awareness of Doxy-PrEP was lower, with 55.6% (n = 20) of respondents having heard of it. Only 22.9% (n = 8) had prescribed Doxy-PrEP in the past year. Support for Doxy-PrEP varied, with 57.1% (n = 20) stating they would be more supportive of its use for longer periods if officially endorsed, while 85.7% (n = 30) supported its use during periods of heightened sexual activity.

Concerns regarding Doxy-PEP and Doxy-PrEP

Participants' overall support for Doxy-PEP was high, with a mean rating of 7.5 (SD = 2.1) on a 10-point scale. Concerns about prescribing Doxy-PEP primarily centered on antibiotic resistance (64.9%, n = 24), followed by side effects (35.1%, n = 13) and patient adherence (13.5%, n = 5). Cost-effectiveness (2.7%, n = 1) were rare and ethical concerns were not mentioned by any participant.

Support for Doxy-PrEP was lower than for Doxy-PEP, with mean ratings of 4.6 (SD = 4.6) for long-term use and 6.7 (SD = 2.1) for use during periods of heightened sexual activity. Concerns about Doxy-PrEP followed a similar pattern, with antibiotic resistance being the most commonly cited issue for both long-term (83.8%, n = 31) and short-term (86.5%, n = 32) use. Side

effects (67.6%, n = 25) and patient adherence (56.8%, n = 21) were also notable concerns for long-term use. Ethical concerns were mentioned particularly in qualitative feedback (free-text field) including concerns about shortages that require medications to be used only if actually needed (which was not perceived to be the case in this instance). Other practitioners stated that more research in the area is needed to convince the medical community. One practitioner specifically stated:

> If it works, it works. But it will take a lot to get the medical community on board with this one as it is against pretty much anything we have learned.

Discussion

The findings of this study highlight the complex relationships among demographic, behavioral, and experiential factors in shaping perceptions of Doxy-PrEP. Firstly, the strong association between HIV PrEP use and acceptance of Doxy-PrEP suggests that those already engaged in biomedical STI prevention are more open to additional or other pharmaceutical strategies. This reflects trends seen in HIV PrEP uptake, where prior familiarity with biomedical prevention leads to fewer concerns about new interventions (Gaspar et al., 2022;; Hoffmann, 2016; Martinez et al., 2016). Aside from current use of HIV PrEP, older GBMSM groups have had decades of lived experience being the subject to various HIV preventions and medical treatment programs (Liboro et al., 2021). This constitutes a long history of trials, changes, improvements and arguably risks associated with adhering to medication in a bid to stamp out this epidemic since the late 1980s. Further, the rapid rise in success rates for both prevention and treatment of HIV are likely to make additional preventative medicines more likely to be trusted. The current usage rates of HIV PrEP, the catastrophic loss of life during the HIV and AIDS pandemic when no treatment was available within living memory, and the safety and reliability of current PrEP and PEP medications are possibly reasons for the high acceptability and perceived feasibility of an ongoing Doxy-PrEP for the prevention of bacterial STIs in this group.

The second primary finding of our analysis was the influence of age. Older participants were more likely to see Doxy-PrEP as a suitable and relevant intervention, while also being less likely to favor alternative STI prevention options. These findings may reflect greater exposure to STI prevention strategies over time, a heightened sense of STI risk based on past experiences, or greater familiarity with medications and health issues more generally, which in turn may make them more open to biomedical interventions (Co et al., 2023; Smith et al., 2020). In contrast, younger participants may be less engaged in biomedical prevention or more cautious about pharmaceutical interventions (Warzywoda et al., 2024), with research also showing a stronger tendency among young people to non-adherence to treatment – potentially affecting their perception of an approach that required heightened adherence (American Psychological Association, 2012; Gast & Mathes, 2019). These lower levels of engagement with biomedical prevention may be the result of various individual and structure factors (Warzywoda et al., 2024), including a general distrust of pharmaceutical interventions, concerns about potential side effects or a preference for behavioral prevention over pharmaceutical approaches. Additionally, younger individuals may perceive their personal STI risk as lower, leading to reduced motivation to engage in structured prevention methods (Buhi & Goodson, 2007; Traeger & Stoové, 2022). The transient nature of healthcare access for younger populations, including limited engagement with primary care providers, may further contribute to lower adherence and uptake of biomedical prevention options (Kang et al., 2003; Robards et al., 2019). Furthermore, research has theorized a recent trend toward a more conservative approach and perception of sexuality in young people which may impact on the perception of treatment options (Hegde et al., 2022; Nilan et al., 2023). These differences suggest that age plays a central role in how people perceive new prevention strategies, independent of other factors such as sexual orientation or education level.

Thirdly, familiarity with antibiotics also appeared to influence perceptions. Participants with a history of antibiotic use were more likely to

accept Doxy-PrEP, possibly because they see antibiotics as a more routine and low-risk part of healthcare. This aligns with broader patterns in health decision-making, where people tend to be more comfortable with interventions they have previous experience with (Effah et al., 2020). However, this may have pharmaceutical implications, as ongoing or inappropriate antibiotic use may contribute to antimicrobial resistance, which remains a major concern for public health (Luetkemeyer et al., 2023). This concern also applies to Doxy-PEP, where its post-exposure use could contribute to resistance if not appropriately monitored or if used excessively. Ensuring that Doxy-PrEP is prescribed and used correctly within a well-regulated framework will be crucial in balancing individual benefits with wider public health risks. As an example, the Centers for Disease Control and Prevention' Guidelines for Doxy-PEP highlights potential resistance in common bacterial pathogens associated with Doxy-PEP and emphasizes the importance of minimizing antimicrobial use, which may be even more important in the context of Doxy-PrEP (Bachmann et al., 2024).

Finally, the non-significant findings were unexpected although this may be partly attributable to the limited statistical power associated with the sample size. For example, despite well-documented disparities in STI risk and healthcare access across different demographic groups, factors such as Indigenous status, sexual orientation, education level, and engagement in sex work were not significant predictors of Doxy-PrEP perceptions. This contrasts with previous research that has shown clear differences in STI prevention attitudes and accessibility among these groups (Collins & Rocco, 2014; National Academies of Sciences & Medicine, 2021). The lack of significant differences here suggests that perceptions of Doxy-PrEP may be shaped more by broader social influences, such as healthcare access, health literacy, and community attitudes toward biomedical prevention, rather than demographic characteristics. It is also possible that social media, 'influencers', and populations having access to broad, varied, and not always reliable source of health news and information may make them untrusting of the introduction of new medications, especially if they are to be used in a preventative capacity (Powell & Pring, 2024). It is well documented that Indigenous groups in Australia have low to negligible trust for the health care system and providers, and this may have also influenced the findings in this study (Freeman et al., 2014). Finally, given the large social resistance to the uptake of vaccines during the COVID-19 pandemic, and the ongoing skepticism about the harm they may have caused and may continue to cause, this may be a precarious time in history for proposing a new population based medical intervention (Jennings et al., 2021; Thaker et al., 2023). Many media platforms and politicians continue to encourage these fears and may contribute to apprehension it the populations that follow and trust them. This might raise questions about whether these interventions are perceived as an established STI prevention measurement or if their potential uptake follows different social and behavioral patterns that have not been captured by our research.

As with other biomedical prevention strategies, the introduction of Doxy-PrEP is not just a medical issue - it is also shaped by social, cultural, and behavioral factors. The transition from condom-based STI prevention to biomedical strategies, particularly within GBMSM communities, has been met with mixed responses (Holt et al., 2016). While some see these interventions as important tools for reducing risk and increasing sexual freedom and agency, others are concerned about their potential to encourage behavioral changed such as reduced condom use. This shift in risk management strategies needs to be carefully considered in future messaging and policy development to ensure that Doxy-PrEP is applied appropriately and in conjunction with other preventive measures.

More broadly, the adoption of these interventions should be understood within the framework of risk perception and management. Risk, in a public health sense, is not just about numerical probabilities and realities - it is socially constructed and shaped by cultural narratives, personal experiences and healthcare messaging – which may also explain differences in the perception and acceptability of this and other approaches between cultures and within sub-cultures (Beck, 1992). In this study, older participants may be more accepting of Doxy-PrEP because they have been exposed to STI

prevention messaging for a longer time, whereas younger individuals might view risk differently, prioritizing alternative prevention strategies or being more cautious about pharmaceutical interventions. This is consistent with sociological perspectives on health behavior that broadly suggest that individuals do not make health decisions in isolation but are influenced by peer networks, social norms, and the broader cultural landscape (Lupton, 1999). Similar patterns may apply to Doxy-PEP, particularly in how it is framed as an emergency measure versus an ongoing preventive approach.

The findings of this study are consistent with those from the recent systematic review on the acceptability and feasibility of pre-exposure prophylaxis for bacterial STIs (Carroll et al., 2025), which found that STI PrEP was generally well accepted among GBMSM, particularly those with prior STI diagnoses or sexual behaviors associated with a higher risk of STIs. However, the systematic review as well as participants in our study highlight ongoing concerns about antimicrobial resistance and the ethics of long-term antibiotic use. Similar concerns have been raised regarding Doxy-PEP, where debates continue over the tradeoff between its effectiveness in reducing the incidence of bacterial STIs and its potential contribution to antibiotic resistance, particularly in the context of increasing medication shortages. The review also pointed to gaps in knowledge about how best to implement STI PrEP in clinical settings, reinforcing the need for further research on how healthcare providers approach Doxy-PrEP and how communities perceive their role in STI prevention.

Implications for practice and policy

Healthcare providers will need to carefully weigh the risks and benefits of Doxy-PrEP when discussing them as a prevention option. While their potential to reduce bacterial STI incidence is well-documented, concerns about antimicrobial resistance must be central to discussions with patients. Given the strong link between PrEP use and Doxy-PrEP acceptance, integrating discussions about Doxy-based STI prevention into existing PrEP services may be an effective approach. This could involve tailored counseling on the benefits and risks of antibiotic prophylaxis, particularly for those who are already engaged in biomedical STI prevention.

However, ensuring that these interventions are used responsibly requires more than just clinical integration. Clear, evidence-based guidelines will be essential to navigate concerns around antimicrobial resistance and long-term antibiotic use. Given that some clinicians remain hesitant about prophylactic antibiotic use, professional development programs must provide clear, updated information to bridge the gap between emerging research and real-world clinical practice. Additionally, robust regulatory frameworks must be in place to prevent self-medication and unregulated use, ensuring that individuals receive proper medical oversight and support.

From a policy standpoint, there is a need for structured guidance on the implementation of both interventions. While the ASHM Consensus Statement (ASHM, 2023a) provides a framework for Doxy-PEP, a more comprehensive policy approach that also includes Doxy-PrEP is necessary. Key considerations must include stringent monitoring of antibiotic use to minimize resistance, ensuring equitable access to these interventions, and developing education strategies to support informed decision-making among both potential users and providers, as demonstrated in related sexual health areas (Santaolaya et al., 2024; Warzywoda et al., 2024). In this context, it should also be taken into account that for individuals with frequent sexual encounters with non-steady partners, event-based use of Doxy-PEP may lead to higher cumulative antibiotic exposure compared to Doxy-PrEP, due to the 200 mg dosing per episode versus 100 mg daily dosing as it raises potentially important considerations for both prescribing practices and long-term antimicrobial stewardship. Furthermore, unlike HIV, bacterial STIs are typically treatable with short antibiotic courses. This distinction raises questions about the necessity of daily antibiotic use for preventing infections that are generally manageable, especially given known impacts on the microbiome and the risk of contributing to antimicrobial resistance.

Given the potential long-term public health risks, ongoing research into the impact of doxy-based STI prevention on antimicrobial resistance is important. Policymakers should prioritize studies that assess both the clinical effectiveness of these interventions and their broader implications for strategies for the prevention of bacterial STIs. Here it should also be noted that controlled studies assessing the efficacy of Doxy-PrEP and Doxy-PEP remain largely limited GBMSM and, to a lesser extent, transgender women, with a lack of evidence across other populations. Such studies are needed to establish a stronger evidence base for other populations. Further behavioral research is needed to understand potential shifts such as changes in condom use and STI testing behaviors following the adoption of doxy-based STI prevention.

Strengths and limitations

A key strength of our study is the inclusion of both consumer and health provider perspectives, allowing for a more comprehensive understanding of potential facilitators and barriers to implementation. The use of targeted recruitment strategies ensured the participation of individuals from priority populations. It should be recognized that these groups are heterogeneous and that not all individuals within them necessarily experience elevated risk. The integration of adaptable vignettes helped contextualize responses and minimize social desirability bias.

As with any study, our study has limitations. The provider survey had a small sample size, limiting the generalizability of findings. While the sample size of the consumer survey ($n = 250$) is modest, particularly for key populations beyond GBMSM, it nonetheless provides valuable preliminary insights into perceptions of Doxy-PrEP and Doxy-PEP in an Australian context. The limited number of participants from some key populations may constrain the generalizability of findings, and future studies with larger and more diverse samples are important to confirm and extend these results. However, the richness of the data and the consistency of certain patterns across participants offer a meaningful starting point for informing practice and guiding more targeted research efforts. Additionally, while ordinal regression identified significant predictors, the models explained only a portion of the variance, suggesting that other factors influence perceptions that were not captured by our variables. Self-reported data may also be subject to response bias.

Note

1. Tetracycline resistance refers to the ability of bacteria to survive tetracycline antibiotic treatment due to mechanisms such as efflux pumps, ribosomal protection or enzymatic inactivation, reducing its effectiveness in treating bacterial infections.

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The authors report there are no competing interests to declare.

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author (DD) upon reasonable request. The data are not publicly available due to ethics restrictions.

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