r/askgaybros: PrEP Participation and Health Information Dissemination on Reddit

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Abstract

In 2012, the approval of Truvada (emtricitabine/tenofovir) as an HIV (human immunodeficiency virus) preventative medication called PrEP (pre-exposure prophylaxis) made meaningful disruption to the spread and transmission of HIV viable. Despite acclaim, PrEP remains a controversial and stigmatized solution for preventing HIV. Due to this skepticism, social networking sites have emerged as fundamental platforms upon which information about PrEP is disseminated, negotiated, and consumed. This research develops a mixed-methods critical discourse analysis of a digital platform central in PrEP’s online negotiation, namely the subreddit r/askgaybros. r/askgaybros is a self-moderated community of gay-identifying men and men-who-sleep-with-men (MSM). It acts as an opportunity to explore how PrEP is communicated online. Further, it serves to clarify how the unique functionalities of Reddit influence the fundamental conclusions made about PrEP and its consumption. r/askgaybros and its conclusions may be of interest to healthcare professionals interested in addressing PrEP stigma and misinformation in platform-mediated spaces. It also sheds light on the strengths and limitations of Reddit as a mechanism for health and treatment information.

Keywords: PrEP, HIV, Reddit, platform, SNS-health-informatics, gay, MSM, misinformation, public health, nVIVO, public-health, stigma, homophobia.

Introduction

With the approval of Truvada (emtricitabine/tenofovir) as an HIV (human immunodeficiency virus) preventative medication called PrEP (pre-exposure prophylaxis) in 2012, meaningful disruption in the spread and transmission of HIV became viable. The drug is demonstrated to be up to 99% effective, and a chorus of professionals, both medical and otherwise, emerged calling it a resounding miracle (Stern, 2014). It disrupts decade-long understandings of safe and unsafe sex (Auerbach and
Hoppe, 2015). Despite the treatment’s acclaim, PrEP remains a controversial and stigmatized solution for preventing HIV (Hackl and Newman 2015). A panoply of intersecting factors - including institutional and systemic homophobia, exorbitant treatment costs, social stigma, and community concern - have clouded PrEP with misinformation and uncertainty (Grov et al., 2015). Skepticism saturates both physical institutions and digital resources that hold information about the treatment (Kirby et al., 2014). As Schwartz and Grimm (2016) note, due to this skepticism, social networking sites and forums have emerged as primary platforms upon which information about PrEP is disseminated, negotiated, and consumed.

The purpose of this research is to develop a mixed-methods critical discourse analysis of a digital platform central in PrEP’s online negotiation, namely the subreddit r/askgaybros. This research exists in direct reference, and contribution, to a growing body of scholarship identifying the digital discourses around PrEP. It looks to expand this scholarship by developing the first study investigating information about PrEP on Reddit. r/askgaybros is a self-moderated community (numbering 52,550) of gay-identifying men and men-who-sleep-with-men (MSM), who post and comment about sex and men’s health related topics. In investigating this community’s negotiations with PrEP, and its use as a poz prevention tool, the Subreddit offers a unique opportunity to explore how gay and MSM-identifying individuals are engaging with HIV treatment options online. This study considers this engagement in a specifically digital context, with concentrations that tie Reddit as a social platform to the forms of communication and information dissemination it fosters. r/askgaybros and its revelations aid healthcare professionals interested in understanding how to better address PrEP stigma and misinformation in platform-mediated spaces. It also sheds light on the strengths and limitations of Reddit as a mechanism for health and treatment information.

Due to the limitations of the study in size and scope, it does not look to confirm broader impediments to PrEP participation such as cost or accessibility. Instead, it takes aim at Reddit’s unique functionality in disseminating and facilitating information about PrEP, and how computer mediated communication (CMC) influences the conclusions gay and MSM-identifying men make about PrEP. This study holds one fundamental research question:

How do the unique functionalities of Reddit as a networked digital platform disseminating health information influence the fundamental conclusions made about PrEP and its consumption?

r/askgaybros as a Designated Community

It must be acknowledged that the online community in question - r/askgaybros - represents only

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1This number references the community membership size of r/askgaybros at the moment of submission.

2poz prevention, refers to an HIV health framework developed by the Toronto People with AIDS Foundation (PWA) that promotes new infection without stigmatizing HIV positive individuals (PWA, 2016).
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a fraction of broader gay and MSM-identifying communities. Their most recent community census (2016) provides some information about the members that designate this Subreddit. In line with the rest of the Reddit platform, this is a very young community with 73.6% of its members between the ages of 18-27, and an additional 7.9% below the age of 17. The community also identifies as 94.5% cis-male, 73.7% Caucasian, 85.3% homosexual, and 98% primary English speakers. This data confirms the median member of r/askgaybros to be young, white, cis, homosexual, and English-speaking. The limited scope of this community make it an ineffective resource for conclusions about the functional reasons that gay and MSM-identifying men as a whole are abstaining from PrEP participation. Instead, this study looks to understand how PrEP participation is negotiated on Reddit’s platform infrastructure, and the forms of communication it facilitates.

**Literature Review**

Acknowledging the wealth of scholarship addressing digital platforms, HIV, and PrEP consumption, various intersecting bodies of literature inform and reinforce this study. The following literature review will identify a selection of those academic discourses in brief, each influenced by one another, while uniquely integral to the study of r/askgaybros.

The study of social networking sites (SNS), emerges from a diverse set of disciplinary and methodological traditions, and builds on a large body of precedent research into computer-mediated communication (CMC) (Herring, 2001). Early research into SNS identifies the characteristics of SNS users–primarily looking to interpret their motivations–and gratification online. However, recent studies have taken more nuanced approaches, investigating discourses, interactions, and the functions of sites independently (Hughes et al., 2012). As boyd and Elison note, answers are found directly within the wealth of social and behavioural data that permeate SNS (boyd and Elison, 2007). This data enables social network researchers to explore behavioural and knowledge patterns on a scale unparalleled prior to digital communication (Golder et al., 2007; Kumar et al., 2006).

Despite popular use, Reddit is an unexplored arena in contemporary scholarship. Early interest in the functions of the site are limited to analysis by journalists, curious at the site’s proliferation. Chris Miller’s (2015) description of Reddit highlights its unique communicative affordances, such as content organization, upvoting, and misinformation distribution. Other investigations into Reddit coalesce around the site’s technical infrastructure, or to its dedication to self-governance and free speech online. Rachel Metz’s (2012) assessment of Reddit’s popularization through “design oriented towards user-generated content and self-governance,” lends itself to further study. The unique ways individuals and amorphous online communities are able to leverage Reddit as a channel of harassment must face more deliberate scholarship. Betteridge (2016) explains, that Reddit communities demonstrate great technical skill in engaging with ethical grey zones, and exploit platform policies that offer protection to potential harassment victims. Further, as Massanari (2016) notes in an in-depth investigation of the platform politics that support Reddit, interactions on the SNS allow for harassment that might be
avoided on platforms that enforce alternative communication structures and policies. Reddit is not the first, or only SNS, onto which hate and misinformation can spread. What is evident however, is how Reddit’s affordances in communication enable these qualities in collaboration with its members.

To address Reddit’s facilitation of online communities based in misinformation, the discourses behind precedent “flaming” and “trolling” practices become particularly helpful here. This research provides contextual insight into r/askgaybros’ distribution of misinformation online. Much of the first wave of scholarly writing on flaming appeared in the late 1980s and 1990s and includes a broader debate surrounding technological determinism and so-called “computer effects” (Kiesler, Zubrow, Moses, & Geller 1985, p. 84). This debate concerns itself with whether flaming is motivated primarily by the social environments that facilitate its production, or by computers and digital technologies independently (Lilly, 2016). This debate calmed with the publication of Lea’s (1992), “Social Influence and the Influence of the Social,” which rejects precedent determinism through studying group behaviour online, and observes that flaming is radically context dependent, yet the scholarship remains valuable to this study. “Trolling” soon displaced the term “flaming,” to describe much of the hateful or misinformed online communication (Phillips, 2015) However, interpreting how misinformed discourses are reinforced as they enter the digital mundane is a valuable model for this study’s investigation of platform-based communication (Maltby & Thornham, 2016). While r/askgaybros, does not contain text-based hate in the traditional sense, flaming and trolling practices reveal the ubiquity of community members exploiting holes in the social dynamics of the discourses of digital media.

Literature detailing social media platforms and their relation to public health information is developing quickly. As Schwartz and Grimm (2016) note, social media sites are becoming one of the most popular platforms for the dissemination and discussion of health information. In their study of antibiotic related status updates on social media, Scanfeld et al. (2010) concluded that social media sites are not only a venue for the dissemination of health information and advice, but also a platform to generate discussions on various health topics. A study by scholar Brad Love (2013) about vaccination and social media, reported that users frequently discussed the development of new vaccines and collectively interpreted research findings about vaccine effectiveness. While distributed health information online is by no means always correct, understanding how social media platforms influence community health information is essential to this study.

Recent studies specific to PrEP and its discussion on social network sites, center around two fundamental conclusions. First, they evidence that social media is incredibly influential on gay men and MSM’s decisions to become PrEP participants (Kelen & Casswell, 2017). Second, they assert the autonomy of the user to digitally confirm or reject uncertainty and stigma about PrEP. For example, a recent study at the University of Southern California examined social media representation around PrEP for HIV prevention on Twitter (Zheng et al., 2014). The results reveal that PrEP-related Tweets covered a wide range of issues, such as side effects, adherence issues, risk compensation, moral judgments, and targeted recipients. Joseph Schwartz and Josh Grimm’s (2016) study of PrEP and its negotiation on
Twitter, showed that tweets simultaneously reinforced uncertainty about PrEP adoption, while also empowering users with the platforms to counter stigmatizing narratives about PrEP. Such studies ground this research into PrEP and r/askgaybros.

The final body of scholarship this study is indebted to is research investigating the intake of, and barriers to, PrEP in gay-identifying and MSM communities. This literature is sprawling but can be understood through three corresponding channels. First, as Doblecki-Lewis notes, for many medical professionals, PrEP is unknown as an innovative means of achieving HIV prevention (Doblecki-Lewis et al., 2017). Second, stigmatization within and outside of gay/MSM communities continues to deeply influence how individuals think about PrEP (Grov et al., 2015). Due to implications that PrEP encourages the abandonment of safer sex practices, some PrEP users report feelings of stigmatization (Grov et al., 2015). References to gay men on PrEP as “truvada whores,” because they engage in more condomless intercourse (Calabrese and Underhill, 2016) are not uncommon. In addition to concerns about stigma, several logistical barriers to PrEP adoption exist. These include the cost and accessibility of the medication as well as concerns about negative side effects (Grov et al., 2015).

A variety of scholarship engages with digital platforms, HIV and PrEP consumption. Medical reports, anthropological and cultural literature, in addition to understandings of digital platforms, each play a role in informing and reinforcing this study. The discourses outlined above identify a selection of scholarship integral to the study of r/askgaybros.

**Theoretical Framework**

Words yield pervasive potentials in their ability to define and redefine. This has led some researchers to consider how information acts within specific socio-cultural contexts. These considerations form a relevant methodology for the study of r/askgaybros, namely, critical discourse analysis. This methodology is indebted to an array of scholars who developed and popularized its use. Foucault (1980) and Fairclough (1993) developed the fundamentals of this methodology, acknowledging that discourse becomes not just a means of representing human reality, but of signifying that reality, while constructing its meaning simultaneously. As this study is concerned with quantifiable evidence surrounding r/askgaybros understandings of PrEP, it also looks to discourse scholars such as Teun van Dijk and Ruth Wodak, who incorporate flexible, mixed, quantitative and qualitative approaches (Wodak & Meyer, 2008; Weir, 2005).

The crux of this project is to map r/askgaybros’ negotiations with PrEP use on the Reddit platform. In the digital context, scholars of this discourse, such as Rodney Jones (Jones et al., 2015), interpret text as a matter of the concrete situated actions people perform with particular mediational means (such as computers and mobile phones). Here, digital practices refer to amalgamations of actions involving tools with digital technologies, (in this case Reddit) that are utilized by virtual communities to attain certain knowledge, social goals, or identities. They assume that digital technologies make possible new kinds of social engagement (Wells, 2012). Discourse analysis in this digital context then is the study of
different ways “technologies of entextualization” influence the knowledge individuals construct about PrEP use, and the actions they perform in relation to preventing new diagnoses (Jones et al. 2015, p. 11).

Critical discourse analysis is not without limitation. There are concerns regarding the viability of critical discourse analysis as a methodology in investigating virtual communities like r/askgaybros. As Wodak and Meyer (2008) state, “…the same text or utterance is understood in significantly different ways by different groups of listeners/writers/viewers” (p. 17). Words, text, and discourse alone, are not all-knowing. Behaviour and meaning are constructed by communities and cultures, and embedded within dialectic layers of cultural memory and ways of knowing (Wodak & Meyer, 2008). This investigation proceeds with such limitations in mind, looking to Wells’ (2012) assertion that although critical discourse analysis lacks a master-key to unlock a means of knowledge production, it provides a series of related pathways, through which it can be explored.

**Mixed-Methodologies and Critical Discourse Analysis**

This project utilizes a mixed-methods critical discourse analysis that employs both qualitative close reading, and quantitative code-based discourse analysis. Its findings will stem first from a lengthy qualitative reading. This qualitative analysis first maps the r/askgaybros community in its virtual venue, Reddit, to understand its perspectives on the use of PrEP and how Reddit infrastructures influence the conclusions and discourses that emerge. To prevent deficits in quantitative understandings around PrEP use, combining close qualitative reading with quantitative analysis allows for the development of a more extensive picture of r/askgaybros’ virtual community. An assembled coding dictionary draws on knowledge gathered from precedent qualitative reading.

**Dataset**

This analysis looks to investigate the content produced by the r/askgaybros community between January 2016 and November 2017. Its primary source material is limited to the ten most commented-on posts that mention PrEP, engaged with by the community in addition to their 785 comments (795 posts in total). The posts are primarily empty text, some hypertext links and images are included. Each post and its corresponding comments configures a case. Comments on posts are included in this analysis. As a forum, communicative media relies upon the contributions of commenters, unlike a blog post, which exists for independent information distribution. These cases were chosen for analysis based on the number of comments to ensure the data remains free from the influence of the researcher’s selection bias. The collection of cases in total provides a large data set that is comprehensive enough to make empirical assumptions about the nature of the community, relative to its venue on Reddit.

**Coding Strategy**

This coding strategy is assembled based on data gathered by drawing on qualitative reading, and the literature surrounding r/askgaybros (see Coding Dictionary). Each post and the comments that
follow are coded following two fundamental content categories. The first includes the source of awareness or information about PrEP. This category codes each post or comment based upon their inclusion of personal testimony, second-hand testimony, rumor or unspecified content, in addition to the multi-modality of each post, and their ecosystem contribution. The second content category codes barriers to PrEP participation. This includes posts or comments that mention PrEP stigma in its various forms, slut-shaming, trolling, and hateful-content. It also includes posts and comments that address information about PrEP cost, side-effects, and accessibility. The first content category forms the primary content related to this study's conclusions, the second is coded to gain information about how stigma and barriers to PrEP relate to communication dissemination on Reddit. The content is then coded and analyzed quantitatively through the discourse analysis data mining software nVIVO, which annotates, retrieves and analyzes the large collection of data. The categories are reiterated below, and are indebted to two contemporary studies of Twitter in relation to PrEP consumption: Schwartz and Grimm (2016), Zheng et al. (2014).

The content categories in this coding analysis include:

1. **Source of Awareness/Information about PrEP:** post or comment containing source of information about PrEP or use of PrEP.
2. **Barriers and Consequences to PrEP:** post or comment detailing barriers to PrEP adoption.

**Preliminary Findings**

The forum information distribution model that r/askgaybros facilitates is most significant in that it shapes discourses around PrEP largely as testimonial health information. Often from personal experience, these posts proceed as follows “I started PrEP back in October for the exact same reasons that you gave... I was slightly woozy for a day at first but haven’t noticed anything else after that” (Your Mini-Guide to PrEP, 2016). This type of testimonial about PrEP accounted for 326 or 41% of the 795 posts and comments coded in this study. Second hand testimonials, often referencing a friend or partners experience with PrEP accounted for 48 or 6% of the total 795 posts. Testimonial communication is common on Reddit, with Subreddits like r/askdocs demonstrating similar communication strategies. However, it is largely unseen on other SNS like Twitter, and Facebook (Shwartz and Grimm, 2016).

As r/askgaybros is a self-moderated community, with little interference from any submissions review process, communication creates testimonial publics whereby gay and MSM-identifying men collectively negotiate with their experiences with PrEP, and how it is affecting their lived realities.

Testimonial public discourse about PrEP is also significant in that a negative correlation can be drawn between posts that communicate through personal experience, and posts that harboured animus, slut shaming, and hate. Only 5% or 16 of the 326 posts that communicate through personal testimony contained references to slut-shaming. Most were benign, with proclamations like “I had issues with fatigue in the beginning but since then everything has been fine” (PrEP and it’s side effects, 2017). This anonymous, and often conflict-free communication facilitates the creation of a wealth of
knowledge surrounding PrEP. It is essential to not undervalue the knowledge assets that reside in this participatory community forum. Here, the Subreddit “aggregates the expertise of non-experts, based on specific situated knowledge” (Zheng et al. 2014, p. 128). Gaps remain in understanding how much this information is trusted, with scholars undecided as to whether online health information is trusted blindly (Eastin, 2001). However, as Wan-Ying Lin et al. (2016) note, it is likely that this community uses testimonial knowledge to fill the gaps in health information that institutional bodies fail to provide. This claim is subjective. However, the relatively small number of testimonial comments that link to reputable medical information, or contribute to any broader information ecosystem, at 26 or 8% of the 326 testimonial comments, leads one to this conclusion. Reddit here functions as a platform for the production and dissemination of community knowledge that, for r/askgaybros, provides a valuable resource to those underserved by the medical establishment.

In the process of providing r/askgaybros with a means to disseminate valuable first-hand information about PrEP, the Subreddit also creates affordances for the spreading of misinformation, sex-negativity, and slut-shaming. The sharing of misinformation is most visible on r/askgaybros in its popularization of sex-negative rumors about PrEP users. Most significant, is the proliferation of unsourced information citing a connection between using PrEP and spreading Hepatitis C. For example, community member Lolzini99’s post, “People barebacking while on PrEP are spreading Hep C” which cited an unsourced, undated article about Hepatitis C and the gay and bi community in Amsterdam, led to a tirade of sex-negative rumors (2017). These rumors follow a corresponding formula, using baseless information to shame PrEP participants. For instance, No_Homo_I_Swear writes, “fucking barebacking anything that walks spreads disease, as proven by studies. Truvada is only 40-45% effective without condoms” (PrEP and Its Side Effects, 2016). Evident here is the potential the Subreddit provides to communicate slut-shaming misinformation within the broader r/askgaybros community. This is not uncommon with mentions of stigmatizing information accounting for 167 or 21% of the posts and comments coded in this analysis. The positive correlation between stigmatizing and rumor-based or unspecified information, with 36% or 24 of the unspecified posts containing stigmatizing language, further substantiates the potentially dangerous affordances that such an unmoderated platform provides.

This proliferation of sex-negative content within the r/askgaybros Subreddit also facilitates dangerous stereotypes and characterizations about PrEP users. The most visible of these stereotypes is the categorization of PrEP users as “truvada whores.” The term, used to define PrEP users as “promiscuous gay men taking a prevention pill so they can continue having dangerous bareback sex” (Duran 2012, p. 3), has plagued community discourses since its inception by David Duran in 2012. As demonstrated by the r/askgaybros community, the stigma continues to endure. Mention of the “truvada whore” stereotype, parallels community member MrShile’s comment, “just recently they announced a new study that found truvada whores are 40-60 times more likely to have stds.” Unfounded, the term “truvada whore” is visible in 6% or 48 of the 795 posts coded in this investigation. Parallels between this term and mention of “chem-sex whores,” a stereotype that gay and MSM-identifying individuals
are taking PrEP to continue participating in drug-fueled orgies, can be made. However, “chem-sex” is only mentioned in 11 or 1.9% of the 795 posts coded. While the effects of these stereotypes on the community’s PrEP participation cannot be quantified by this study, as demonstrated by the varied and emotional responses brought forth in these comments, it is likely they continue to dissuade community members from PrEP participation. Further, they exemplify the dangerous potentials provided to anyone posting on r/askgaybros to facilitate slut-shaming and sex-negative behaviour in a digital environment.

**Conclusion**

r/askgaybros as a virtual community, is a singular model to explore how Reddit is influencing gay and MSM-identifying individuals’ engagement with PrEP as an HIV treatment option. Through critical discourse analysis of their posts and comments, this research maps the uncertainty, barriers, and stigmas that have slowed the uptake of this treatment since its approval in 2012. It demonstrates how, through testimonial medical information, this informal digital space provides an opportunity for community members to participate in a broader discourse about PrEP, and its repercussions. Here, r/askgaybros fills the gaps in health information that the wider medical establishment either fails to provide or make accessible.

This study also confirms previous research into alternative SNS suggesting that platforms provide gay and MSM-identifying communities with mixed affordances, to both facilitate the sex-negativity and slut-shaming rhetoric that surrounds PrEP, but also to reject that hate in a simultaneously public and anonymous digital environment. This research contributes to a growing body of scholarship identifying the digital discourses around PrEP. As the first research to investigate PrEP on Reddit, the study expands on existing scholarship to provide healthcare professionals with a more extensive understanding of a community’s view of HIV prevention, and Reddit’s potential as a health information resource.
Coding Dictionary

Barriers to PrEP Participation
- Material Barriers
  - Inadequate Access
  - Inadequate Insurance
  - Cost of Medication
- Physical Barriers to PrEP
  - Bone Marrow Depletion
  - Fatigue
  - Kidney
  - Upset Stomach
- Social Barriers to PrEP Participation
  - Irrelevance of PrEP
  - But I’m a Top
  - Condoms Do the Same Thing
- Stigmatization
  - Slut-Shaming
    - Chem-Sex
    - PrEP is Not Hot
    - Slippery Slope
    - Truvada Whore
  - PrEP Users Spread Disease
    - Gonorrhea
    - Hepatitis C
    - Herpes
    - HPV
    - Syphilis

PrEP Information Distribution on Reddit
- Community Opinion
  - Approval
  - Disapproval
- Ecosystem Contribution
  - Link
  - Image
  - Video
  - Platform Multi-Modality
- Information Source
  - Medical Information
  - Uncited Information
- Testimonial Information
  - First Hand
  - Second Hand
  - Unspecified/Rumor
References


Reddit Posts Resources


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