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Investigating the Public Agenda: Examining Factors Related to HIV/AIDS Complacency
in a National Sample of U.S. Adults

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Abstract

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By Jocelyn Taylor

Serial nationally representative surveys describe increases in “HIV/AIDS complacency” as a multi-level occurrence reflecting HIV/AIDS as an issue of diminishing personal concern or national importance. This phenomenon describes the public agenda on HIV, which is influenced by media and factors such as topic salience within a community. Domestic and international studies suggest a relationship between engaging in risky behaviors and complacency due to HAART-related treatment optimism, as well as a relationship between stigmatizing or homophobic beliefs with HIV/AIDS complacency. Plausible causal models developed with MSM suggest complacency can be operationalized as perceived threat of HIV, predicted by perceptions of severity and susceptibility to the disease. Participants were recruited from a nationally representative online research panel (n=6713). A 10-point item assessed HIV/AIDS complacency operationalized as perceived threat; higher scores indicating HIV/AIDS as an important national issue. One-Way ANOVA and correlations examined bivariate relationships between complacency and the following variables: age; education; gender; region; sexual identity; race; treatment optimism; stigma; homophobia. Participants’ mean perceived threat score was 6.5 (± 2.1). Blacks (M=7.9, ± 2.0) and Hispanics (M=6.7, ± 2.2) scored higher than whites (M=6.2, ± 2.0). Bivariate analyses indicated that statistically significant differences in mean perceived threat score existed among all measures. The final multivariate model included all measures and explained 18% of the variance in perceived threat. Decrease perceived threat was related to treatment optimism, while increased perceived threat was related to stigmatizing beliefs about people with HIV or AIDS, and non-homophobic beliefs. The largest predictor of perceived threat was race, potentially because of topic salience in particular racial/ethnic communities. As complacent individuals are more likely to engage in risky behaviors, prevention efforts should consider these individual and community-level differences when engaging the public with HIV prevention messages.

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INTRODUCTION

Over 30 years since HIV was identified as the cause of AIDS, HIV and AIDS persist as national health concerns (Barre-Sinoussi et al., 1983; Gallo et al., 1983; Kaiser Family Foundation, 2012). The Centers for Disease Control and Prevention (CDC) estimates that about 50,000 people become newly infected with HIV each year (CDC, 2014). Over 1.2 million people are estimated to be living with HIV in the United States (US), and 1 in 7 do not know they are infected (CDC, 2014; CDC, 2015).

Gay, bisexual, and other men who have sex with men (MSM) continue to be most severely affected by HIV (CDC, 2012a; CDC, 2012b). In 2010, even though CDC estimates MSM only represent 4% of the male U.S. population (Purcell et al., 2012), male-to-male sexual contact was responsible for 63% of all new HIV infections and 78% of new infections among men (CDC, 2012). White MSM were the group with the largest number of estimated new infections in 2010 (N=11,200), followed by African American or Black (N=10,600) and Hispanic or Latino (N=6,700) MSM (CDC, 2012a; CDC, 2012b). Heterosexual sexual contact accounted for 1 in 4 of the estimated new infections in 2010; approximately two-thirds of those infected through heterosexual sex were women (CDC, 2012).

Key populations are disproportionately affected by the epidemic, such as racial and ethnic subgroups, and people living in specific regions of the US (CDC, 2012a; CDC, 2014; CDC, 2015). Blacks and Latinos carry a particularly high disease burden. For example, Blacks account for 44% of new HIV infections, though only representing

approximately 14% of the US population (CDC, 2012a; CDC, 2014; CDC, 2015b).

Latinos only represent approximately 17% of the US population, but account for 21% of new HIV infections (CDC, 2012a; CDC, 2014; CDC, 2015). Regional differences persist in describing the disease burden of the HIV epidemic. Of the nearly 50,000 HIV diagnoses in 2012, over 24,000 were in the South, compared to just over 9,000 in the Northeast, approximately 8,500 in the West, and over 6,000 in the Midwest (CDC, 2015).

HIV/AIDS Complacency

Although the epidemiological data demonstrate that HIV continues to reach individuals across the United States, public health researchers and members of the American press have documented the existence of a phenomenon known as “HIV/AIDS complacency” (KaiserFamilyFoundation, 2012; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, Torian, et al., 2011; Valdiserri, 2004). Valdiserri (2004) defined this phenomenon as “minimizing, discounting, or discrediting the threat of HIV/AIDS.”

HIV/AIDS complacency can shift the public sentiment on HIV/AIDS, producing differing outcomes on a societal, community, and individual level (Valdiserri, 2004). On a societal level, HIV/AIDS complacency may result in decreased funding for HIV/AIDS prevention efforts or decreased news coverage of HIV-related topics in favor of emerging diseases (Valdiserri, 2004). On a community level, HIV/AIDS complacency is posited to

affect community norms about HIV prevention (Valdiserri, 2004). On an individual level, several studies demonstrate that factors related to HIV/AIDS complacency (e.g. . optimistic beliefs about antiretroviral treatment efficacy) predict engaging in high risk behaviors, such as engaging in unprotected anal intercourse with positive or unknown partners (Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, Torian, et al., 2011) and having multiple sex partners (Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; Milbury, Tannir, & Cohen, 2011; Valdiserri, 2004).

Research exploring HIV/AIDS complacency has largely focused on individual level outcomes, such as the high risk sexual behaviors described above. However, Valdiserri (2004) suggests that numerous factors not directly related to HIV/AIDS complacency may contribute to these outcomes. For example, the concept described as “HIV prevention fatigue” may not exactly be related to diminished concern about the threat of HIV, though it predicts high risk sexual behavior (Frew et al., 2013; Jaffe, Valdiserri, & De Cock, 2007; Rowniak, 2009; Valdiserri, 2004; Wolitski, Valdiserri, Denning, & Levine, 2001). This phenomenon has been found in populations, such as MSM, that have been inundated with HIV prevention messages since the beginning of the HIV epidemic (Frew et al., 2013; Jaffe et al., 2007; Rowniak, 2009; Valdiserri, 2004; Wolitski et al., 2001). As a result those who may be at risk may no longer be responsive

to targeted prevention messages or HIV information (Frew et al., 2013; Jaffe et al., 2007; Rowniak, 2009; Valdiserri, 2004; Wolitski et al., 2001).

Numerous studies explored optimism related to new medications to prevent or treat HIV as a potential factor contributing to HIV/AIDS complacency (Brennan et al., 2010; Kalichman, Eaton, & Cherry, 2010; Kalichman et al., 2007; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, Torian, et al., 2011; Milbury et al., 2011; Peterson, Miner, Brennan, & Rosser, 2012; Smith et al., 2011). In recent studies in the US of MSM, “treatment optimism,” has been associated with engaging in unprotected anal sex with HIV negative partners or partners of unknown status (Brennan et al., 2010; Kalichman et al., 2007; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, Torian, et al., 2011; Peterson et al., 2012), and unprotected anal intercourse with partners known to have an HIV status discordant with study participants (Brennan et al., 2010; Joseph, Flores, Parsons, & Purcell, 2010).

International studies found similar relationships between treatment optimism and behavior. In a general population study in Kenya, Smith and colleagues (2011) found that treatment optimism was associated with more life-time sex partners and more casual sex

among heterosexual women. In European studies of people living with HIV or AIDS, the publication of the “Swiss Statement” was associated with changes in condom use among sexually active people France and increased instances of unprotected sex in people attending clinics and hospitals in Switzerland (Hasse et al., 2010; Rojas Castro et al., 2012). The “Swiss Statement” was physician-targeted statement issued by the government of Switzerland (2008) stating, "An HIV-infected person on antiretroviral therapy with completely suppressed viraemia (“effective ART”) is not sexually infectious, i.e. cannot transmit HIV through sexual contact” (Dalton & McCord, 2008; Hasse et al., 2010; Persson, 2010; Rojas Castro et al., 2012). Though subsequent statements were published to clarify the risk of HIV transmission, this one statement shifted the Swiss perception of HIV risk, and further influenced Swiss and Europeans in neighboring countries to consider more risky sexual activities (Dalton & McCord, 2008; Hasse et al., 2010; Persson, 2010; Rojas Castro et al., 2012). This example of shifting public opinion highlights the relationship between public health outcomes and public sentiment on a disease.

Public Opinion

Valdiserri (2004) describes trends in public sentiment on HIV/AIDS as “temporal changes in the general perception of HIV/AIDS risk.” Serial national studies by groups such as Kaiser Family Foundation indicate substantial shifts in US public opinion on HIV/AIDS over the past 30 years (Kaiser Family Foundation, 2012). When asked to name “the most urgent health problem facing the nation today,” 68% of respondents to

the Kaiser Family Foundation serial national study indicated HIV/AIDS in 1987, compared to 38% in 1997 (Kaiser Family Foundation, 2011). More recent results indicate that although HIV was selected by 10% of respondents in 2012, these data vary greatly by population (Kaiser Family Foundation, 2012). For example, 17% of Black respondents selected HIV as the most urgent health problem in 2012, while 7% of white participants made the same selection (Kaiser Family Foundation, 2012). These findings were consistent with responses collected in previous survey years. (Kaiser Family Foundation, 2012).

The sentiment of HIV/AIDS as an issue of diminishing national importance is observed along with data suggesting most US adults are not personally concerned about becoming infected with HIV. Kaiser reported only 13% of US adults were very concerned about becoming infected in 2012, compared to 22% in 1995 (Kaiser Family Foundation, 2012). The shift in personal concern signifies a clear departure from the early years of the HIV epidemic when statements such as “AIDS: The Bubonic Plague of the 21st Century” highlighted the alarmist concerns fueling public sentiment on HIV and AIDS (Bayer, 2010). At this same time, activists from organizations such as ACTUP held national protests with slogans such as “Time isn’t the only thing the FDA is killing,” highlighting the urgent need for prevention and treatment action to stem the rising tide of new incident HIV cases (“ActUP NY Chronology 1988”, n.d.).

Media and Public Agenda

Several researchers explain the shift in national attitudes as the result of gradual changes in media coverage of HIV and AIDS (Valdiserri, 2004; Rodgers, Dearing, & Chang, 1991; Dearing & Kim, 2008; Boyson, 2014). A media study by Dearing and Kim (2008) indicated that when comparing HIV/AIDS reporting from 1981 to 1988 and 1988 to 2003, there were no overall significant differences in the number of new stories during the two time periods, though they noted substantial variation between specific years (Dearing & Kim, 2008). For example, between 1984 and 1985, the number of *New York Times* articles containing HIV or AIDS in the title or content jumped from around from around 400 to over 800.

However, after 1986, the number of articles remained over 1,000, only exceeding 1,200 in 1991 and 2003 (Dearing & Kim, 2008). Differences were observed in the type of reporting, shifting from publications describing scientific journal articles to the public, to articles discussing the personal stories of celebrities, such as Rock Hudson (Dearing and Kim, 2008; Rodgers, Dearing, & Chang, 1991). Dearing and Kim (2008) suggest this continuity in news coverage is the result of key stakeholders pushing for media coverage from news organizations, or necessitating media coverage by creating newsworthy policies or providing funding to organizations that participate in news-generating activities.

No current content analysis exist to examine contemporary trends in HIV/AIDS reporting, though Boyson and colleagues (2014) posit that current news articles may

focus on the efficacy of new biomedical prevention strategies told through the exposition of exemplars. They describe an exemplar as, “a singular descriptor example, or story, communicated with the intent of representing a larger population of events” (Boyson, Zimmerman, & Shoemaker, 2014; Zillman, 1999). Utilizing a convenience sample of 236 college students and gay men, Boyson and colleagues (2014) conducted a 2x2 factorial experiment to explore how the presence of exemplars in artificial news studies impacted the perception of antiretroviral (ARV) medication effectiveness. Results indicated that news stories including an exemplar, such as a personal story of an individual taking antiretroviral medications, were more influential on perceived ARV effectiveness than including statistical success rate data. The effect was moderated by sexual orientation, as gay male participants were not influenced by the presence or absence of exemplars. Boyson and colleagues (2014) argued that as HIV/AIDS is a more salient issue for gay men, they may be more influenced by direct experience with the topic than the mediated experience of the study (Boyson, Zimmerman, & Shoemaker, 2014). In sum, Boyson and colleagues (2014) demonstrate that the type of news stories presented can greatly influence beliefs, highlighting media’s influence on public opinion. Also, topic salience can influence beliefs more than media stories, highlighting the complexity of the development of public opinion.

Study Purpose

This study examines HIV/AIDS complacency from a macro-level by evaluating public opinion on the perceived threat of HIV/AIDS in a nationally-representative panel

survey of US adults. To determine the relative importance of HIV as a national issue, individual-level differences in beliefs will be explored as predictors of perceived threat of HIV/AIDS. Evaluating diminished concern about HIV/AIDS this way allows a glimpse into the public agenda, which is influenced by current and historical media stories about HIV/AIDS and the salience of the issue to the individual.

As this is a study with a national sample of diverse individuals, it is posited that particular beliefs may influence attitudes about HIV risk. In the US, stigmatizing beliefs persist about people living with HIV and individuals or groups most at risk for HIV infection, including MSM (Buseh, Kelber, Stevens, & Park, 2008; Derlega, Winstead, Greene, Serovich, & Elwood, 2002; Farber, Shahane, Brown, & Campos, 2014; Genberg et al., 2009; Herek, 2009; Herek & Capitanio, 1993; Kinsler, Wong, Sayles, Davis, & Cunningham, 2007; Rodriguez, Madera, & Diaz, 2013). Perceived stigma describes both stigmatizing attitudes about HIV expressed by HIV negative individuals as well as anticipated stigma by HIV positive individuals (Derlega et al., 2002; Herek, 2009; Herek & Capitanio, 1993). This study will thus investigate the relationship between HIV/AIDS complacency and perceived stigma and homophobia.

Theoretical Approach

The current study is informed by constructs from the health belief model (HBM) and agenda setting theory as previously adopted in the literature to explain shifting national perceptions of the threat of HIV and AIDS (MacKellar et. al, 2011; Dearing and Kim, 2008). In accordance with the HBM, the threat of HIV is explained, in part, by the

individual's beliefs about the severity of the disease and their susceptibility to the disease (Becker, 1974). In a study of young MSM ages 23-29, MacKellar and colleagues (2011) explored HIV/AIDS complacency as both reduced concern about personal susceptibility to HIV and reduced concern about the severity of HIV and AIDS. These complacency constructs described as the perceived threat of HIV and AIDS are explained by two beliefs: 1) the severity of HIV/AIDS is reduced by antiretroviral treatment, and 2) individuals are less susceptible to HIV because of antiretroviral treatment. The reduced HIV/AIDS concern complacency construct is explained by both the complacency construct "reduced susceptibility concern" and the belief that antiretroviral treatment decreases the severity of HIV/AIDS. In sum, HIV/AIDS complacency is posited to be more than treatment optimism, though optimistic beliefs can explain reduced concern about the threat of HIV (MacKellar et. al, 2011). Thus, this study will explore HIV/AIDS complacency as perceived threat of HIV and AIDS.

The outcome measure in this study, perceived threat of HIV/AIDS, will be explored using a public sentiment measure that is a continuous adaption of an item used to measure national HIV/AIDS sentiment in Kaiser Family Foundation, "On a scale of 1 to 10, where 1 is the least important and 10 is the most important, how would you rate the importance of HIV as a national health problem facing this nation today" (Kaiser Family Foundation, 2012). A macro-level analysis of HIV/AIDS complacency must consider shifts in public sentiment as documented and influenced by media. The influence of media on public opinion has been studied in mass communication research for many years (Lippmann, 1922; Finnegan & Viswanath, 2008). Agenda setting theory explains

the process by which topic salience is largely influenced and often determined by media coverage (Rogers and Dearing, 1988; Kosicki, 1993; Dearing & Kim, 2008; Finnegan & Viswanath, 2008). Kosicki (1993) described the three research traditions of agenda-setting research: 1) media agenda setting, which is concerned with how mass media prioritizes coverage of some issues and others; 2) public agenda setting, which describes the influence mass media has on public opinion and priorities; 3) policy agenda setting, which examines the impact media coverage of key issues has on the policy actions of legislatures and other policy-making individuals or groups, partially influenced by the public agenda (Rogers & Dearing, 1988; Kosicki, 1993; Dearing and Kim, 2008; Finnegan & Viswanath, 2008). Agenda- setting, in each tradition, is influenced by real world events or other indicators of the issue's importance, as well as the personal experience and interpersonal communications (Rogers & Dearing, 1988). Further, the public's attention to issues may vary depending on which topics are prioritized by media coverage (Downs, 1972). As there is limited room on media agenda, attention to issues such as HIV/AIDS will shift as other issues gain increased media coverage and become more prominent (Rogers & Dearing, 1988; Kosicki, 1993; Dearing & Kim, 2008; Downs 1972). Therefore, perceived threat of HIV/AIDS should reflect the current public agenda as influenced by both the media agenda and personal factors influencing topic salience.

Additionally, individuals reporting higher levels of stigmatizing or homophobic beliefs may also report decreased perceived susceptibility to HIV/AIDS. A study of young adults in Ghana found that stigmatizing beliefs about people with HIV or AIDS had a direct negative effect on perceived vulnerability to HIV acquisition and intentions

to practice safer sex activities (Riley & Baah-Odoom, 2012). Further, the impact of stigmatizing beliefs about people with HIV on safer sex intentions was mediated by perceived vulnerability (Riley & Baah-Odoom, 2012). A US study of college-aged adults, found lower levels of perceived susceptibility to HIV acquisition among respondents expressing homophobic beliefs and higher levels of perceived susceptibility among respondents reporting greater social distance from people living with HIV (Schieman, 1998). This study also suggested that participants who believed the media portrayal of HIV and AIDS was accurate also reported more homophobia and social distancing (Schieman, 1998). Considered together, these studies argue for further exploration of stigma and homophobia as factors in HIV/AIDS complacency. Also, Schieman's (1998) study suggests people with homophobic or stigmatizing beliefs may be more influenced by media coverage than their counterparts. Thus, if contemporary media coverage suggests HIV is no longer an issue national concern, this group may report beliefs supporting this suggestion.

Treatment optimism will be used to explore perceived severity of HIV and AIDS. While not exact measures for perceived susceptibility, homophobia and stigma are documented in the literature to relate to lower susceptibility beliefs. Therefore, this study will explore the relationship between stigma, homophobia and perceived threat of HIV to examine the if these beliefs are predictive HIV/AIDS complacency. This study will explore the following research questions with the accompanying hypotheses:

RQ1: How do optimistic beliefs about the efficacy of antiretroviral therapy (ART) influence concern about the threat of HIV and AIDS.

H1: Beliefs that new medicines mitigate HIV/AIDS will predict lower perceived threat scores.

RQ2: Does topic salience within a community influence concern about the threat of HIV and AIDS?

H2: Higher perceived threat scores should be found in subpopulations at greater risk for HIV.

RQ3: Do stigmatizing and homophobic beliefs influence perceived threat of HIV and AIDS?

H3: Individuals with homophobic or stigmatizing beliefs will have lower perceived threat scores than their counterparts.

LITERATURE REVIEW

Centers for Disease Control and Prevention (CDC) estimated that 47,352 people were diagnosed with HIV infection and 26,688 were diagnosed with AIDS in 2013 (CDC, 2015). The number of individuals testing positive for HIV annually has declined significantly from around 130,000 in the mid-1980s, to around 50,000 since the mid-1990s (CDC, 2012a). However, specific subpopulations continue to carry a disproportionate amount of disease burden; this includes racial and ethnic groups, such as Black and Hispanic communities, as well as gay, bisexual, and other men who have sex with men (MSM) (CDC, 2012a; CDC, 2014; CDC, 2015). By transmission category, Black, White, and Hispanic MSM currently account for the highest numbers of new infections, followed by African American women (CDC, 2012a; CDC, 2014; CDC, 2015).

HIV/AIDS Complacency or Perceived Threat?

Though HIV persists as a national health concern, complacent beliefs about HIV have been documented in the academic literature by numerous studies (KaiserFamilyFoundation, 2012; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, Torian, et al., 2011; Valdiserri, 2004). As described in Chapter 1, complacent beliefs diminish the actual threat of HIV and AIDS, and resulting a host of HIV prevention challenges.

Valdiserri (2004) provides a natural history of the roots of HIV/AIDS complacency, as well as implications for next steps in HIV and AIDS program and policy development. In deconstructing HIV/AIDS complacency, he describes the construct as consisting of factors related and unrelated to antiretroviral treatment. . Additionally, Valdiserri (2004) posits that individual level outcomes associated with HIV/AIDS complacency may be the result of factors unrelated to the phenomenon. For example, the concept described as “HIV prevention fatigue,” described in the introduction, may not exactly be related to diminished concern about the threat of HIV, though it predicts high risk sexual behavior (Frew et al., 2013; Jaffe et al., 2007; Rowniak, 2009; Valdiserri, 2004; Wolitski et al., 2001). This phenomenon has been found in populations, such as MSM, that have been inundated with HIV prevention messages since the beginning of the HIV epidemic (Frew et al., 2013; Jaffe et al., 2007; Rowniak, 2009; Valdiserri, 2004; Wolitski et al., 2001). Another example Valdiserri (2004) provides relates to “post crisis HIV/AIDS prevention strategies” which may be misinterpreted by researchers exploring

increased risky sexual behaviors. Thus, studies relying solely on a dichotomous outcome measure for risky sex, such as unprotected anal sex at last sexual encounter, may fail to consider risk reduction strategies, such as serosorting or seropositioning, chosen by MSM familiar with the breadth of available prevention options (Kippax & Race, 2003; Valdiserri, 2004).

Further complicating the issue, national knowledge levels about HIV transmission have increased significantly since the disease was first identified. Thus, with greater access to epidemiological data, shifts in media coverage, and new medicines to prevent and treat HIV, individuals in communities with lower disease burden report lower perceptions of the threat of HIV (Valdiserri, 2004; Dearing & Kim 2008; Kaiser Family Foundation, 2011). Finally, individuals may have reduced concern about HIV as a national issue because of competing priorities for public attention largely determined by the quantity and content of domestic media coverage (Dearing & Kim, 2008; Boyson et. al., 2014). As there is limited room on media agenda, attention to issues such as HIV/AIDS will shift as other issues gain increased media coverage and become more prominent (Rogers and Dearing, 1988; Kosicki, 1993; Dearing and Kim, 2008; Downs 1972).

Many studies explore complacent beliefs related to HIV and AIDS, though there is a dearth of contemporary literature on the topic within the context of US audiences. A May 2015 PubMed search of the terms “HIV” and “complacency” produced 89 results, with only five US-based studies presenting empirical evidence in the past 10 years.

However, a PubMed search of the terms “HIV” and “treatment optimism” produced 295 studies, with well over 10 US-based studies in the past 5 years. Further, recent studies referencing HIV/AIDS complacency often conflate complacency with related constructs, such as HIV treatment optimism. For example, Chapter 1 presents the Boyson and colleagues (2014) news experiment exploring the influence the type of news stories produced by the media has on individual opinions of HAART efficacy. In describing complacency, the article presents empirical evidence specifically related to beliefs of treatment optimism in tandem with Valdiserri’s (2004) description of HIV/AIDS complacency as reduced concern related to treatment optimism. Further, Boyson and colleagues’ (2014) analysis, it is unclear if distinctions are made between HIV/AIDS complacency construct and optimistic beliefs regarding the efficacy of treatment.

MacKellar and colleagues (2011) provide a roadmap for evaluating HIV/AIDS complacency among populations of young MSM. The plausible causal model proposed in their study suggests that HIV/AIDS complacency can be measured with two constructs: the first is reduced susceptibility concern and the second is reduced HIV/AIDS concern. Their model operationalizes constructs from the health belief model (HBM) to explore recent risky behaviors among young MSM, aged 23-29, which are measured as behaviors within the past six months. Risks include having ten or more sex partners, unprotected anal intercourse with a partner who is HIV positive or whose status is unknown, daily alcohol use, methamphetamine use, or sex under the influence of drugs or alcohol (MacKellar et. al., 2011). These risks are posited to be predicted by the HIV/AIDS complacency constructs. In accordance with the HBM, the threat of HIV is explained, in

part, by the individual's beliefs about the severity of the disease and their susceptibility to the disease (MacKellar et. al., 2011). MacKellar and colleagues' (2011) model argues two beliefs explain reduced concern about personal susceptibility to HIV: 1) the belief that the severity of HIV/AIDS is reduced by antiretroviral treatment, and 2) the belief that individuals are less susceptible to HIV because of antiretroviral treatment. The complacency construct is reduced HIV/AIDS concern, explained by both reduced susceptibility concern and the belief that HAART mitigates HIV/AIDS (MacKellar et. al., 2011). In sum, HIV/AIDS complacency is posited to be more than treatment optimism, though these beliefs can explain reduced concern about HIV as a disease, or about acquiring HIV if HIV negative. Further, MacKellar and colleagues (2011) demonstrate that the HIV/AIDS phenomenon can also be described as perceived threat as operationalized by the Health Belief Model (Becker, 1974).

Treatment optimism

Research over the past two decades of the HIV epidemic has included an exploration of reduced individual-level concern about HIV and AIDS as the result of optimistic beliefs about the efficacy new treatments (Brennan et al., 2010; Kalichman, Eaton, & Cherry, 2010; Kalichman et al., 2007; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, et al., 2011; Milbury et al., 2011; Peterson, Miner, Brennan, & Rosser, 2012; Smith et al., 2011). After the introduction of highly active anti-retroviral treatment (HAART) in the mid-1990s, researchers and clinicians began to observe decreases in AIDS-related deaths, hospitalizations, and individuals achieving an AIDS

diagnosis (Moore & Chaisson, 1999). In tandem with this phenomenon, numerous studies of individuals at risk for acquiring HIV found increased engagement in risky sexual behaviors. For example, examining data from cross-sectional community interviews in San Francisco, Katz and colleagues (2002) found increases in the percentage of MSM reporting unprotected anal intercourse and multiple sex partners, from 24% in 1994 to 40% in 1999.

During this time, researchers began to explore optimism related to the efficacy of new medicines to treat HIV as a cause for complacent beliefs among individuals at risk for HIV. Kalichman and colleagues (1998) conducted a study of a small sample of 298 self-identified gay or bisexual, HIV negative, single men attending a gay pride event in Atlanta. Though only a small number of men reported recently engaging in unprotected anal sex, this group was more likely to endorse optimistic beliefs about new HIV treatments reducing the risk of HIV transmission (Kalichman, Nachimson, Cherry, & Williams, 1998). Similarly, among a group of MSM recruited at a gay-target event in Chicago, reduced concern about HIV was associated with optimistic beliefs about new HIV treatments (Venable, Ostrow, McKirnan, Taywaditep, & Hope, 2000).

The International Collaboration on HIV Optimism (2003) found similar findings in a survey of gay men conducted in January and December 2000 in Sydney and Melbourne, Australia (n=3,120), Vancouver, Canada (n=357), London, England (n= 690), and Paris, France (n=1,715). Researchers assessed endorsement of optimistic beliefs with a four-item scale, with higher scores indicating higher levels of treatment optimism

(International Collaboration on, 2003). High risk sexual activity was measured as unprotected sex in the past 3, 6, or 12 months with a casual partner (International Collaboration on, 2003). Bivariate analyses of the optimism scale indicated that mean optimism scores were significantly related risky sexual activity in London, Paris, Sydney and Melbourne ($p < .001$), but not Vancouver ($p = .5$) (International Collaboration on, 2003). In the cities with statistically significant results, higher levels of treatment optimism were observed among men reporting unprotected sexual activity (International Collaboration on, 2003).

Domestic and international studies have investigated constructs related to HIV treatment optimism, employing varying theoretical approaches to explain observed associations between optimistic beliefs and behaviors. Constructs of the health belief model (HBM) are often operationalized to describe treatment optimism in study populations. (Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; MacKellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, Torian, et al., 2011). The HBM posits that individuals may engage in behaviors to prevent acquiring or transmitting HIV, such as wearing condoms, if they perceive HIV as threat. In this way, individuals are less likely to engage in HIV prevention behaviors if they believe they are less susceptible to HIV and if they believe HIV and its sequelae are less severe (Beckner, 1974; Champion & Skinner, 2008). These constructs were explored my numerous studies with inconclusive results; this is exemplified by a cross-sectional study of HIV positive adult MSM (N=346) recruited from New York (n=123), Houston

(n=71), Boston (n=49), and Los Angeles (n=103) to attend a sexual health seminar (Brennan, et. al. 2010; Rosser 2008). Participants in this study were currently taking antiretroviral treatment and reported at least one act of unprotected anal intercourse within the past year (Brennan, et. al. 2010). The “Trt-O” scale was used to measure perceived susceptibility, perceived severity, and condom motivation (Brennan, et. al. 2010). Susceptibility was measured using a 10-item scale measuring beliefs that individuals are less likely to transmit HIV to partners because of new treatment (i.e., “Because we now have effective treatment for HIV, using condoms every time I have receptive anal sex [being fucked] is less important to me”) (Brennan, et. al. 2010). Severity was measured using a four-item scale reflecting HIV as a less severe illness because of new treatments (e.g., “My life is much better now that I am on combination drug therapy [HAART]”) (Brennan, et. al. 2010). When all scales were included in the final logistic model, only perceived susceptibility was significantly associated with discordant unprotected anal sex (Brennan, et. al. 2010).

As outlined above and in Chapter 1, numerous cross-sectional studies have demonstrated conflicting results related to treatment optimism and actions indicating reduced concern about HIV transmission or acquisition. Longitudinal studies present additional inconclusive results. Huebner and colleagues (2004) recruited HIV-negative or never tested single gay and bisexual young adult men (ages 18-30) in Phoenix, AZ, Albuquerque, NM, and Austin, TX into a longitudinal study collecting data at approximately three time intervals, 18 months apart. Results of the initial cross-sectional survey indicated that among men reporting higher levels of susceptibility for HIV, higher

levels of treatment optimism was associated with unprotected anal intercourse with casual partners (Huebner, Rebchook, & Kegeles, 2004). Longitudinal analyses by Huebner and colleagues (2004) found that future risky sexual activity was not predicted by reduced HIV concern because of treatment optimism measured at baseline; however, reporting risky sexual behavior at follow-up predicted subsequently measured reduced HIV concern because of treatment optimism. This phenomenon was observed in other studies, leading researchers to suggest that treatment optimism may be a post-hoc rationalization for engaging in risky sexual behaviors, suggesting that a broader theoretical approach may be warranted (Huebner et al., 2004; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011; Valdiserri, 2004; Williamson & Hart, 2004).

Cognitive dissonance theory (CDT) was suggested as an alternative explanation for observed cross-sectional associations (Aronson, 1969; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011). This theoretical approach explains that individuals experience stress when realizing their risky behaviors are dissonant with their cognitions (internalized attitudes and beliefs) about transmitting or acquiring HIV (Aronson, 1969; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011). To alleviate the stress, beliefs and attitudes are modified through a rationalization of behaviors (Aronson, 1969; Mackellar, Hou, Whalen, Samuelsen, Valleroy, Secura, Behel, Bingham, Celentano, Koblin, LaLota, Shehan, Thiede, & Torian, 2011). MacKellar and colleagues (2011) combined CDT with

HBM and protection motivation theory (PMT) to propose a causal model for HAART-mitigated beliefs, HIV/AIDS complacency, and risk behavior. The study population (N=1593) included HIV-negative and never tested young men, ages 23-29, recruited from six metropolitan cities. Beliefs that HAART mitigates HIV severity and susceptibility, and complacency constructs suggesting reduced concern about susceptibility to HIV and reduced HIV/AIDS concern, predicted engaging in high risk activities (e.g., recent unprotected anal sex and ten or more sex partners). However, the authors suggest additional research if a reciprocal relationship exists between HIV/AIDS complacency and risk behavior. Further, they suggest prospective studies to verify the suggested causal pathways proposed by the model.

Agenda-Setting

Cohen (1963) stated that the press “may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about.” This quote summarizes the agenda setting function of the mass media, in which topic salience is largely influenced and often determined by media coverage. As previously discussed, attitudes and beliefs about antiretroviral therapy explain HIV/AIDS complacency constructs, such as reduced concern about susceptibility to HIV. However, it is unclear how well individual-level factors predict national attitudes and beliefs. Further, macro-level analysis of HIV/AIDS complacency must consider shifts in national attitudes as documented and influenced by media.

Media's influence on public opinion has been investigated by researchers for nearly a century (Lippmann, 1922; Finnegan and Viswanath, 2008). Early hypotheses posited a direct or strong relationship between the public sentiment on a particular issue and media coverage of that issue (Lippmann, 1922; Lazarsfeld, Berelson, & Gaudet, 1948; Finnegan and Viswanath, 2008). Finnegan and Viswanath (2008) argue that this relationship describes the agenda-setting process by which the media to make specific issues "king," while providing key intervention opportunities for public health professions able to harness media influence.

According to Dearing and Kim (2008), "an agenda is set of issues that is communicated in a hierarchy of importance at a point in time," though the relevance and importance of these issues shifts over time. Three research traditions exist in agenda-setting research: 1) media agenda setting, which is concerned with how mass media prioritizes coverage of some issues and others; 2) public agenda setting, which describes the influence mass media has on public opinion and priorities; 3) policy agenda setting, which examines the impact media coverage of key issues has on the policy actions of legislatures and other policy-making individuals or groups, partially influenced by the public agenda (Rogers and Dearing, 1988; Kosicki, 1993; Dearing and Kim, 2008; Finnegan and Viswanath, 2008). Agenda-setting, in each tradition, is influenced by real world events or other indicators of the issue's importance, as well as the personal experience and interpersonal communications (Rogers & Dearing, 1988).

Research argues that media agenda setting is a complex interplay between the media, advocacy groups, key opinion leaders, and institutions; thus, the media does not act independently on the public agenda (Walgrave & Van Aelst, 2006; Finnegan and Viswanath, 2008). Although the language and symbols media use to describe issues is posited to transform public problems into social constructions, the symbolic definition of the issues and its subsequent influence on public agenda relies, in part, on the proponents of the issue (Entman, 1993; Reese, 2007; Finnegan & Viswanath, 2008). Therefore, building or shifting the public agenda for important health topics must involve a host of actors working in partnership with media professionals to shift influence public opinion (Walgrave & Van Aelst, 2006; Finnegan & Viswanath, 2008).

Media Agenda and HIV/AIDS

Several studies indicate that national HIV-related media coverage has been relatively consistent throughout key phases of the epidemic (Dearing & Rodgers, 1996; Rodgers, Dearing & Chang, 1991; Dearing & Kim, 2008). Rodgers and colleagues (1991) described the media coverage of HIV and AIDS from 1981 to 1988 as existing in four distinct eras. The initial era, from 1981 to 1983, produced only an average of four monthly news stories on HIV and AIDS that generally examined the disease as a medical mystery (Rodgers, Dearing & Chang, 1991). The second era, called the science era, averaged 24 monthly news stories and lasted from 1983 through 1985 (Rodgers, Dearing & Chang, 1991). During this time, news stories often presented consumer-friendly versions of published peer-reviewed scientific journal articles (Rodgers, Dearing & Chang, 1991). The third phase, called the human era, was marked by the introduction of

Rock Hudson and Ryan White as individuals suffering from HIV or AIDS (Rodgers, Dearing & Chang, 1991). This shift personalized the risk of HIV for many members of the American public and caused a jump in the number of news stories to an average of 112 stories per month (Rodgers, Dearing & Chang, 1991). The final era Dearing and colleagues (1991) present is the political era, with an average of 168 news stories. This era lasted from 1985 to 1988 and was marked by news stories covering issues such as mandatory HIV testing and partner notification.

Between the years 1988-2003, the volume of news coverage of HIV and AIDS was consistent (Dearing & Kim, 2008). Dearing and Kim (2008) demonstrated that the total number of news stories varied between 1000 and 1300 every year from 1987 to 2003. The content of these stories continues the traditions of the human and policy eras previously described, but has shifted to represent the current historical moment (Dearing & Kim, 2008; Rodgers, Dearing, & Chang, 1991). Dearing and Kim (2008) argue that HIV and AIDS have become institutionalized, with news stories about HIV found in all areas of the national news. Also, they posit that increased funding of the epidemic financed the mobilization of key government and nongovernment agencies, further solidifying HIV as an institution (Dearing & Kim, 2008; Rodgers, Dearing, & Chang, 1991; Boyson, et. al., 2014).

Numerous advances in HIV treatment occurred during the span of the media studies conducted by Dearing and Kim (2008), including the introduction of highly active antiretroviral therapy (HAART) between 1995 and 1996 (Palmisano & Vella, 2011).

However, the advent of new and effective combination therapies did not change the overall number of news stories about HIV/AIDS (Dearing & Kim, 2008). The content of media stories shifted to reflect new priorities in the media and public agendas. Dearing and Kim (2008) reported that in the 1990s and beyond, mass media outlets published a decreasing amount of articles solely focused on scientific findings, epidemiological data, or general prevention information about HIV/AIDS; most articles during this time reported on a particular event, celebrity, or other sensational news story related to HIV or AIDS.

As described in Chapter 1, Boyson and colleagues (2014) argue that this content shift may also include news stories expressing either optimism or pessimism regarding biomedical interventions. Though no recent content analysis data exists to examine this claim, the experimental study conducted by Boyson and colleagues (2014) suggests that media reliance on exemplars may cause individuals to overestimate the efficacy of HAART, especially if HIV-negative individuals do not feel they are at risk for HIV acquisition.

Public Agenda and HIV/AIDS

The epidemiological data demonstrate that HIV reaches individuals across the US. However, national surveys demonstrate a lack of knowledge about HIV/AIDS among US adults. The 1989 National Health Interview Survey indicated that 15% of US adults thought a cure existed for AIDS, and 25% thought a vaccine existed for HIV (Hardy, 1990). More recent data for Kaiser Family Foundation (2009) indicate national

knowledge levels have not changed substantially in the nearly 20 years, with 18% of adults surveyed indicating they did not know a cure was unavailable for AIDS and 24% suggesting there is or might be an HIV vaccine.

Serial national studies by groups such as Gallup and Kaiser Family Foundation indicate substantial shifts in US public opinion on HIV/AIDS over the past 30 years. Both organizations regularly propose a similar measure to national samples of US adults. Dearing and Kim (2008) use Gallup data from 1985 to 2003 to model the HIV/AIDS agenda-setting process over time. They found that the number of U.S. adults responding that HIV was the most important issue facing the nation today was highest in 1987, at around 3% of responders (Dearing & Kim, 2008). Though the second highest percentage of responders was in 1993 at 2%, after a steady decline, this number has remained under 1% since 1995 (Dearing & Kim, 2008).

Similarly, Kaiser Family Foundation asked consumers to name “the most urgent health problem facing the nation today,” 68% of respondents to the Kaiser Family Foundation serial national study indicated HIV/AIDS in 1987, compared to 38% in 1997 (Kaiser Family Foundation, 2011). More recent results indicate HIV was selected by 17%, 6%, 7%, and 10% of respondents in 2006, 2009, 2011, and 2012, respectively. These data vary greatly by population. For example, 39%, 22%, 19%, and 17% of Black respondents selected HIV as the most urgent health problem in 2006, 2009, 2011, and 2012, respectively. Comparably, only 13%, 2%, 4%, 7% of white participants made the same selection (Kaiser Family Foundation, 2012).

An interesting aspect of the Kaiser Family Foundation data is that racial groups consistently responded differently to the national surveys. As Black and Hispanic communities carry more disease burden, it follows that HIV would be a more salient issue in these populations. It is unclear what impact the media agenda would have on the populations of individuals participating in the Kaiser Family Foundation surveys, However, as Boyson and colleagues (2014) suggest, public opinion in this group may be more influenced by direct experience with the topic than shifts in the national media agenda. Members of the public with personal experience with particular disease topics may tune into the media stories with differing levels of attention than those without these experiences (Boyson et. al, 2014; Frew et. al, 2014; Heavner et. al, 2007). Therefore, within the larger public agenda, subpopulations persist with distinct agendas; Black and Hispanic participants in the Kaiser Family Foundation studies consistently report beliefs about the importance of HIV and AIDS that over time moves in the same direction of the larger public sentiment. Though not explored by public opinion surveys by Kaiser, given the higher disease burden in particular regions of the US, regional differences in public sentiment may follow similar trends as observed between racial categories.

Theoretical Approach

The current study is informed by the health belief model (HBM) and agenda setting theory to explain shifting national perceptions of the threat of HIV/AIDS. The HBM is a cognitive theory developed by social psychologists in the early 1950s to explain lack of participation in disease prevention and protection programs (Beckner, 1974; Champion & Skinner, 2008). The HBM and other similar value-expectancy

theories posit that an individual's behavior is a function of the subjective *value* of an outcome and the subjective probability or expectation that their actions will result in that outcome (Champion & Skinner, 2008). Thus, desire to avoid HIV acquisition or transmission (value) relies on the belief that particular available actions could prevent the risk of acquisition or transmission (expectation) (Champion & Skinner, 2008).

Key constructs of the HBM inform the hypotheses and research questions developed for this study, though this project does not claim to fully explicitly operationalize the HBM. The HBM was chosen because it operationalizes perceived threat to be a combination of perceived severity and perceived susceptibility (Champion & Skinner, 2008). Perceived severity can describe the seriousness associated with contracting an illness, managing treatment, and dealing with any repercussions in daily life (Champion & Skinner, 2008). Perceived susceptibility describes the probability that an individual might contract an illness (Champion & Skinner, 2008). Taken together, perceived severity and perceived susceptibility describe the perceived threat of an illness.

The current study evaluates factors related to perceived threat in a national sample of adults. MacKellar and colleagues (2001) include the phenomenon of treatment optimism into their plausible causal model for HAART-mitigated beliefs, HIV/AIDS complacency, and risk behavior. Perceived threat, in their model, is described by the HIV/AIDS complacency constructs. They describe perceived severity of HIV/AIDS as "reduced HIV/AIDS concern" and perceived susceptibility as "reduced susceptibility concern" (MacKellar et al., 2011). The susceptibility construct is predicted by beliefs

that antiretroviral medications mitigate the likelihood of acquisition of HIV and the severity of HIV if acquired (MacKellar et. al., 2011). Also, reduced HIV/AIDS concern is predicted by both the belief that medications to treat HIV mitigate the severity of the illness and the complacency construct of perceived severity (MacKellar et. al., 2011). This model was also used to inform the current study's hypotheses regarding the relationship of treatment optimism to perceived threat.

Agenda setting theory was used to inform the appropriate analytic approach to investigate the public agenda. This study will not investigate the media and policy agenda directly, but describes the public agenda as a function of the current public sentiment on HIV/AIDS and the host of individual beliefs the sentiment comprises. The current public sentiment is explored with a continuous version of the item used to measure national HIV/AIDS sentiment in Kaiser Family Foundation and Gallup studies described above, "On a scale of 1 to 10, where 1 is the least important and 10 is the most important, how would you rate the importance of HIV as a national health problem facing this nation today." Treatment optimism will be used to explore perceived severity of the treat HIV and AIDS. While not exact measures for perceived susceptibility, homophobia and stigma are documented in the literature to relate to lower susceptibility beliefs. Therefore, this study will explore the relationship between stigma, homophobia and perceived threat of HIV to examine the if these beliefs are predictive HIV/AIDS complacency. This study will explore the following research questions with the accompanying hypotheses:

RQ1: How do optimistic beliefs about the efficacy of antiretroviral therapy (ART) influence concern about the threat of HIV and AIDS.

H1: Beliefs that new medicines mitigate HIV/AIDS will predict lower perceived threat scores.

RQ2: Does topic salience within a community influence concern about the threat of HIV and AIDS?

H2: Higher perceived threat scores should be found in subpopulations at greater risk for HIV.

RQ3: Do stigmatizing and homophobic beliefs influence perceived threat of HIV and AIDS?

H3: Individuals with homophobic or stigmatizing beliefs will have lower perceived threat scores than their counterparts.

METHODS

Participants and procedures

This cross-sectional study is based on data from the *SpringStyles* 2014 survey fielded from March 31 to April 21, 2014. Porter Novelli Public Services, an international market research firm, conducted this annual survey to assess national sentiments on health and other topics added by third party entities, including CDC.

Participants were members of KnowledgePanel®, a nationally representative online research panel consistently replenished to maintain approximately 55,000 panelists. To ensure the panel represents the entire U.S. individuals are randomly recruited by address-based sampling methods, and are not excluded if the household does not have a landline or Internet access. Households are provided a laptop and internet access, if needed, to participate in the panel.

Porter Novelli sent *SpringStyles* to a random sample of 7,873 panelists (18 or older) and a supplemental sample of 3,145 panelists with children ages 12-17 to ensure sufficient cases for another survey not included in this analysis. The incentive provided for completion of the survey was 10,000 reward points (equivalent to \$10) and were entered to win a prize through a monthly sweepstakes. Respondents answering less than half the survey (n=58) or completing the survey in less than 7 minutes (n=5) were removed from the dataset. The response rate for the survey was 60.9% (N=6713), comparable with other national surveys using similar sampling methods (Wolff, Subramanian, Acevedo-Garcia, Weber, & Kawachi, 2010; Zytneck, Park, Onufrak, Kingsley, & Sherry, 2014).

Measures

Perceived Threat. The dependent variable was a 10-point item, previously tested on serial national surveys (Kaiser Family Foundation, 2012), and used as a proxy indicator for perceived threat of HIV/AIDS: “On a scale of 1 to 10, where 1 is the least important and 10 is the most important, how would you rate the importance of HIV as a national health problem facing this nation today.” Lower scores suggest low perception of HIV as a national threat.

Treatment Optimism. One item was used a proxy indicator for treatment optimism related to medicines to prevent or treat HIV. “I think HIV is a less serious threat than it used to be because of the available medications.” Response options were “strongly disagree,” “somewhat disagree,” “neither agree nor disagree,” “disagree,” “agree,” and

“strongly disagree.” Agreeing or strongly agreeing with this item was considered to indicate a treatment-related optimistic belief.

Homophobia and Stigma. One item, previously tested on serial national surveys, was used as a proxy indicator for perceived HIV-related stigma: “I would be uncomfortable having my food prepared by someone who has HIV or AIDS.” Response options were “strongly disagree,” “somewhat disagree,” “neither agree nor disagree,” “disagree,” “agree,” and “strongly disagree.” Agreeing or strongly agreeing with this item was considered a stigmatizing response. Similarly, homophobia was assessed as disagreeing or strongly disagreeing with the item “Homosexuality is acceptable to me.”

Sociodemographic Characteristics. Sociodemographic characteristics used in this analysis include sex (male or female), age (continuous measure), education level (less than high school, high school, some college, bachelor’s degree or higher), race/ethnicity (non-Hispanic white, non-Hispanic Black, Hispanic, or non-Hispanic other), and region (Northeast, South, Midwest, West).

Data analyses. Statistical analyses were conducted using PASW Statistics version 18.0 (PASW, Inc, Chicago, IL) and the level of significance was set at $p=.05$. ANOVA and correlations examined bivariate relationship between complacency and the following variables: age; gender; education; region; expressing homophobic beliefs; expressing stigmatizing beliefs. All significant associations were included in a final multivariate linear regression model.

RESULTS

Characteristics of participants are listed in Table 1. Participants' mean perceived threat score was 6.5 ($SD=2.1$). Blacks ($M=7.9$, $SD=2.0$), Hispanics ($M=6.7$, $SD=2.2$), and individuals in the "Other/2+races" category ($M=6.7$, $SD=2.2$) scored higher than whites ($M=6.2$, $SD=2.0$). Respondents with bachelor's degrees or higher reported lower mean scores of than individuals lower education attainment ($M=6.5$, $SD=2.1$). Individuals with some college scored slightly higher ($M= 6.6$, $SD=2.1$) than participants with less than high school ($M= 6.7$, $SD=2.3$) and those with high school education ($M= 6.7$, $SD=2.1$). Respondents identifying themselves as homosexual, gay, or bisexual reported higher mean scores than their heterosexual counterparts ($M=7.1$, $SD=1.9$). Southern participants reported higher mean scores than individuals living in other regions of the U.S. ($M=6.8$, $SD=2.2$). Specifically, participants in the Midwest and West ($M= 6.3$, $SD=2.1$) reported identical mean scores that were lower than individuals in the Northeast ($M= 6.4$, $SD=2.0$).

One-Way ANOVAs were used to examine is statistically significant mean differences exist between the predictor variables and perceived threat. As demonstrated in Table 1, bivariate analysis indicated that statistically significant mean differences exist between mean perceived threat score and all variables. Statistically significant differences in mean perceived threat score existed by race $F(3, 6609)= 150.52$, $p<.001$; response to the treatment optimism measure $F(4, 6531)= 90.10$, $p<.001$; response to the homophobia measure $F(4, 6528)= 8.83$, $p<.001$; response to the HIV/AIDS stigma measure $F(4,$

6554)= 21.40, $p < .001$ and all other demographic items included in the final model. Statistically significant differences in mean perceived threat score existed by region $F(3, 6609) = 24.93$, $p < .001$, however, post-hoc test reveal that significant mean differences only exist between perceived threat scores from individuals in the South and all other regions. Mean perceived risk scores were not significantly different between any other regions.

All items were included in the final multivariate linear regression model. The overall model was significant ($F = 57.8$, $p < .001$). About 4% of the variance in perceived threat score was explained by the homophobia, stigma, and treatment optimism proxy measures. Excluding race, but adding all other variables, explained about 8% of the variance in perceived threat score. The complete model, including race, explained about 15% of the variance in public sentiment.

Perceived threat scores decreased (indicating HIV/AIDS as a less important national issue) when participants report treatment-related optimism ($B = -.355$, 95% CI (-.397, -.312), $p < .001$), and increased when reporting non-homophobic beliefs ($B = .136$, 95% CI (.100, .173), $p < .001$), and stigmatizing beliefs ($B = .100$, 95% CI (.059, .141), $p < .001$) (Table 2). Also, compared to participants living in the Northeast, Southern respondents reported a statistically significant increase in public sentiment scores ($B = .260$, 95% CI (.120, .401), $p < .001$). No other region was significant. Race was significantly related to public sentiment score, with Black participants indicating the largest increase in perception of public sentiment scores (indicating HIV/AIDS as a more

important national issue) when compared to White participants ($B=1.61$, 95% CI (1.454,1.769), $p<.001$) (Table 2).

DISCUSSION

Perceived threat of HIV/AIDS varied greatly based on a host of factors, but also align with the epidemiological data. Black and Latino individuals, Southerners, and homosexual, gay or bisexual respondents all reported higher scores than their counterparts; also, race, region and sexual orientation were significant predictors of perceived threat score. As demonstrated by the epidemiological data, particular communities carry a larger disease burden, thus increasing the number of individuals impacted by HIV and AIDS within these communities. Further, the public agenda is influenced by real world events or other indicators of the issue's importance, as well as the personal experience and interpersonal communications (Rogers & Dearing, 1988). Therefore, it follows that persons within particular communities would have more personal experience and communications about HIV and AIDS. According to agenda setting theory, these experiences could influence perceptions of media messages about HIV/AIDS and shift individual sentiment on the topic (Rogers & Dearing, 1988). Finally, communities hardest hit by the epidemic have been the targeted for HIV prevention messages and interventions by numerous stakeholders and government entities. It follows that individuals within these communities would have higher perceived threat scores than individuals not targeted for HIV prevention efforts.

As hypothesized, treatment optimism predicted perceived threat of HIV/AIDS. Individuals reporting the belief that current medications mitigate the threat of HIV/AIDS provided lower perceived threat scores. This finding aligns with the plausible causal model created by MacKellar and colleagues (2011), which found that the complacency constructs described as the perceived threat of HIV and AIDS are explained by two beliefs: 1) the severity of HIV/AIDS is reduced by antiretroviral treatment, and 2) individuals are less susceptible to HIV because of antiretroviral treatment. Thus, this study result aligns with the first of these beliefs.

Stigmatizing beliefs about people living with HIV or AIDS predicted perceived threat, however the direction of the relationship did not follow the hypothesis. The mean perceived threat score for individuals strongly agreeing with the stigma measure was ($M=7.0$, $SD=2.3$), much higher than any other response category. HIV/AIDS stigma predicted perceived threat, with perceived threat score increasing with as stigma increased. This result may indicate that individuals with stigmatizing beliefs are hyperaware of the threat of HIV/AIDS, possibly because they are more influenced news media coverage of HIV (Schieman, 1998). Further, the stigma measure may demonstrate the social distancing from individuals living with HIV and AIDS. Schieman (1998) found that increased social distancing was associated with increase perceived susceptibility to HIV/AIDS. Finally, the stigma measure could be conceived of as an indicator of a lack of knowledge about HIV transmission. It is logical that individuals harboring the misinformation that HIV is transmissible through food would perceive the threat of HIV to be higher than their more knowledgeable counterparts.

Responses to the homophobia measure predicted perceived threat score as hypothesized. Individuals reporting higher perceived threat scores were also more likely to report agreement the proxy measure, indicating non-homophobic beliefs. Therefore, individuals with homophobic beliefs reported lower perceived threat scores. A Schieman (1998) study of college-aged adults, found lower levels of perceived susceptibility to HIV acquisition among respondents expressing homophobic beliefs, though it is unclear how this susceptibility measure related to threat. Further, as HBM posits that perceived threat is a function of both perceived susceptibility and perceived severity, additional analyses should be conducted to explore if combined measures for homophobia, stigma, and treatment optimism would produce similar theoretically aligned results (Beckner, 1974; Champion & Skinner, 2008).

Only 4% of the variance in the final regression model was explained by treatment optimism, stigma, and homophobia. More robust measures for these constructs may increase the predictive power of the independent variable. However, given that race alone explained 7% of the variance in the model, other measures related to topic salience should also be considered in future research.

This study has several limitations. First, as a cross-sectional survey, this study is unable to assess causality. Also, as cross-sectional research only captures one point in time, it is unclear how the dynamism associated with public opinion may affect the future use of these findings. Another limitation is potential selection bias associated with using an online panel. However, a study comparing items on a similar *Styles* survey,

HealthStyles, and the Behavioral Risk Factor Surveillance System, found the responses analogous (Pollard, 2002). Finally, this study assessed treatment optimism as a proxy measure without first determining participant awareness of new medicines to prevent or treat HIV. However, Kaiser Family Foundation's survey of US adults on HIV/AIDS demonstrated that half (50%) of the sample knew HIV medications could be taken to prevent HIV and while the majority (93%) indicated that HIV treatment improves the lives of those on medication, almost half (49%) indicated that these medicines helped prevent transmission to negative partners (Kaiser Family Foundation, 2012).

Table 1: Sociodemographic characteristics of all respondents and mean perception of HIV threat score of respondents, *SpringStyles* Survey, United States, 2014

	All Respondents		Perceived Threat Mean Score	
	N	%	Mean (SD)	P-value
Total	6713		6.5 (2.1)	
I think HIV is a less serious threat because of the available medications				
Strongly agree	346	5.2	6.6 (2.6)	
Somewhat Agree	1632	24.7	6.1 (2.1)	
Neither Agree nor Disagree	2179	33.0	6.3 (2.0)	<.001
Somewhat Disagree	1303	19.7	6.6 (1.9)	
Strongly Disagree	1141	17.3	7.5 (2.2)	
Homosexuality is acceptable to me				
Strongly agree	1328	20.1	6.7 (2.0)	
Somewhat Agree	1126	17.1	6.4 (2.0)	
Neither Agree nor Disagree	1936	29.4	6.6 (2.0)	<.001
Somewhat Disagree	603	9.1	6.1 (2.2)	
Strongly Disagree	1600	24.3	6.5 (2.4)	
I would be uncomfortable having food prepared by someone who has HIV or AIDS				
Strongly agree	1252	18.9	7.0 (2.3)	
Somewhat Agree	1602	24.2	6.3 (2.1)	
Neither Agree nor Disagree	2154	32.5	6.4 (2.0)	<.001
Somewhat Disagree	906	13.7	6.3 (1.9)	
Strongly Disagree	709	10.7	6.5 (2.3)	
Age, <i>Mean(SD)</i>	46.7(17.3)			
Gender				
Male	3230	48.1	6.3 (2.2)	<.001
Female	3483	51.9	6.7 (2.0)	
Education				
Less than high school	814	12.1	6.7 (2.3)	
High school	1995	29.7	6.7 (2.1)	<.001
Some college	1953	29.1	6.6 (2.1)	
Bachelor's degree or higher	1952	29.1	6.5 (2.1)	
Race/Ethnicity				
White	4461	66.4	6.2 (2.0)	
Black	777	11.6	7.9 (2.0)	<.001
Hispanic	994	14.8	6.7 (2.2)	
Other/ 2+ Races	481	7.2	6.7 (2.2)	
Region				
Northeast	1224	18.2	6.4 (2.0)	
South	2486	37.0	6.8 (2.2)	<.001
Midwest	1442	21.5	6.3 (2.1)	
West	1561	23.3	6.3 (2.1)	
Sexual Identity				
Homosexual/Bisexual/Gay	310	4.8	7.1 (1.9)	<.001
Heterosexual	6152	95.2	6.5 (2.1)	

Table 2: Factors associated with HIV/AIDS perception of HIV threat proxy measure among all respondents, *SpringStyles* Survey, United States, 2014

	Regression Model			
	B	β	P	CI
I think HIV is a less serious threat because of the available medications	-.355	-.194	<.001	(-.397, -.312)
Homosexuality is acceptable to me	.136	.093	<.001	(.100, .173)
I would be uncomfortable having food prepared by someone who has HIV or AIDS	.100	.058	<.001	(.059, .141)
Age	.015	.126	<.001	(.013, .018)
Gender	.386	.092	<.001	(.289, .484)
Education				
Less than high school	.561	.087	<.001	(.390, .732)
High school	.515	.065	<.001	(.387, .643)
Some college	.427	.065	<.001	(.300, .555)
Bachelor's degree or higher	Reference			
Race/Ethnicity				
Black	1.611	.242	<.001	(1.454, 1.769)
Hispanic	.585	.097	<.001	(.437, .732)
Other/ 2+ Races	.755	.091	<.001	(.559, .952)
White	Reference			
Region				
South	.260	.060	<.001	(.120, .401)
Midwest	.006	.001	.938	(-.148, .161)
West	-.092	-.019	.243	(-.247, .063)
Northeast	Reference			
Sexual Identity	.623	.064	<.001	(.392, .854)

REFERENCES

- ActUP NY. (n.d). ActUP Chronology 1988. Retrieved June 13, 2015 from <http://www.actupny.org/documents/cron-88.html>.
- Aronson, E. (1969). The theory of cognitive dissonance: A current perspective. *Advances in experimental social psychology*, 4, 1-34.
- Barre-Sinoussi, F., Chermann, J. C., Rey, F., Nugeyre, M. T., Chamaret, S., Gruest, J., ... Montagnier, L. (1983). Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science*, 220(4599), 868-871.
- Becker, M. H. (1974). *The Health belief model and personal health behavior*. San Francisco: Society for Public Health Education.
- Brennan, D. J., Welles, S. L., Miner, M. H., Ross, M. W., Rosser, B. R., & Positive Connections, T. (2010). HIV treatment optimism and unsafe anal intercourse among HIV-positive men who have sex with men: findings from the positive connections study. *AIDS Educ Prev*, 22(2), 126-137. doi: 10.1521/aeap.2010.22.2.126
- Buseh, A. G., Kelber, S. T., Stevens, P. E., & Park, C. G. (2008). Relationship of symptoms, perceived health, and stigma with quality of life among urban HIV-infected African American men. *Public Health Nurs*, 25(5), 409-419. doi: 10.1111/j.1525-1446.2008.00725.x
- Centers for Disease Control and Prevention. (2012a). *New HIV Infections in the United States*. Retrieved December 31, 2014 from <http://www.cdc.gov/nchhstp/newsroom/docs/2012/HIV-Infections-2007-2010.pdf>
- Centers for Disease Control and Prevention. (2012b). *Estimated HIV incidence among adults and adolescents in the United States, 2007–2010*. Retrieved December 31, 2014 from <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/#supplemental>
- Centers for Disease Control and Prevention. (2013). *HIV in the United States: At a Glance*. Retrieved December 31, 2014 from http://www.cdc.gov/hiv/resources/factsheets/PDF/stats_basics_factsheet.pdf
- Centers for Disease Control and Prevention. (2012). *HIV Surveillance Report, 2012*; vol 24. Retrieved November 30, 2014 from <http://www.cdc.gov/hiv/topics/surveillance/resources/reports>.
- Centers for Disease Control and Prevention. (2015). *HIV Surveillance Report, 2013*; vol.

25. Retrieved April 18, 2015
from <http://www.cdc.gov/hiv/library/reports/surveillance/>.

- Champion, V.L. & Skinner, C.S. (2008). The Health Belief Model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (pp. 45-65). San Francisco, CA: Jossey-Bass.
- Cohen, B (1963). *The press and foreign policy*. New York: Harcourt.
- Dalton, P., & McCord, A. (2008). HIV sexual transmission under HAART: Project Inform comments on 2008 Swiss Statement. *Proj Inf Perspect*(46), 26-28.
- Dearing, J.W. & Kim, D.K. (2008). The Agenda-Setting Process and HIV/AIDS. In T. Edgar, S.M. Noar, V.S. Freimuth (Eds.), *Communication perspectives on HIV/AIDS for the 21st century* (pp. 277-296). New York: Lawrence Erlbaum Associates/Taylor & Francis Group.
- Derlega, V. J., Winstead, B. A., Greene, K., Serovich, J., & Elwood, W. N. (2002). Perceived HIV-related Stigma and HIV Disclosure to Relationship Partners after Finding Out about the Seropositive Diagnosis. *J Health Psychol*, 7(4), 415-432. doi: 10.1177/1359105302007004330
- Entman, R. M. (1993), *Framing: Toward Clarification of a Fractured Paradigm*. *Journal of Communication*, 43: 51–58. doi: 10.1111/j.1460-2466.1993.tb01304.x
- Farber, E. W., Shahane, A. A., Brown, J. L., & Campos, P. E. (2014). Perceived stigma reductions following participation in mental health services integrated within community-based HIV primary care. *AIDS Care*, 26(6), 750-753. doi: 10.1080/09540121.2013.845285
- Finnegan, J.R. & Viswanath, K. (2008). Communication Theory and Health Behavior Change: The Media Studies Framework. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (363-387). San Francisco, CA: Jossey-Bass.
- Frew, P. M., Williams, V. A., Shapiro, E. T., Sanchez, T., Rosenberg, E. S., Fenimore, V. L., & Sullivan, P. S. (2013). From (Un)Willingness to InvolveMENT: Development of a Successful Study Brand for Recruitment of Diverse MSM to a Longitudinal HIV Research. *Int J Popul Res*, 2013. doi: 10.1155/2013/624245
- Gallo, R. C., Sarin, P. S., Gelmann, E. P., Robert-Guroff, M., Richardson, E., Kalyanaraman, V. S., . . . Popovic, M. (1983). Isolation of human T-cell leukemia virus in acquired immune deficiency syndrome (AIDS). *Science*, 220(4599), 865-867.

- Genberg, B. L., Hlavka, Z., Konda, K. A., Maman, S., Chariyalertsak, S., Chingono, A., . . . Celentano, D. D. (2009). A comparison of HIV/AIDS-related stigma in four countries: negative attitudes and perceived acts of discrimination towards people living with HIV/AIDS. *Soc Sci Med*, *68*(12), 2279-2287. doi: 10.1016/j.socscimed.2009.04.005
- Hasse, B., Ledergerber, B., Hirschel, B., Vernazza, P., Glass, T. R., Jeannin, A., . . . Swiss, H. I. V. C. S. (2010). Frequency and determinants of unprotected sex among HIV-infected persons: the Swiss HIV cohort study. *Clin Infect Dis*, *51*(11), 1314-1322. doi: 10.1086/656809
- Herek, G. M. (2009). Hate crimes and stigma-related experiences among sexual minority adults in the United States: prevalence estimates from a national probability sample. *J Interpers Violence*, *24*(1), 54-74. doi: 10.1177/0886260508316477
- Herek, G. M., & Capitano, J. P. (1993). Public reactions to AIDS in the United States: a second decade of stigma. *Am J Public Health*, *83*(4), 574-577.
- Huebner, D. M., Rebchook, G. M., & Kegeles, S. M. (2004). A longitudinal study of the association between treatment optimism and sexual risk behavior in young adult gay and bisexual men. *J Acquir Immune Defic Syndr*, *37*(4), 1514-1519.
- International Collaboration on, H. I. V. O. (2003). HIV treatments optimism among gay men: an international perspective. *J Acquir Immune Defic Syndr*, *32*(5), 545-550.
- Jaffe, H. W., Valdiserri, R. O., & De Cock, K. M. (2007). The reemerging HIV/AIDS epidemic in men who have sex with men. *JAMA*, *298*(20), 2412-2414. doi: 10.1001/jama.298.20.2412
- Joseph, H. A., Flores, S. A., Parsons, J. T., & Purcell, D. W. (2010). Beliefs about transmission risk and vulnerability, treatment adherence, and sexual risk behavior among a sample of HIV-positive men who have sex with men. *AIDS Care*, *22*(1), 29-39. doi: 10.1080/09540120903012627
- KaiserFamilyFoundation. (2012). The Washington Post/Kaiser Family Foundation 2012 Survey of Americans on HIV/AIDS. Retrieved November 2014, from <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8334-f.pdf>
- Kalichman, S. C., Eaton, L., & Cherry, C. (2010). Sexually transmitted infections and infectiousness beliefs among people living with HIV/AIDS: implications for HIV treatment as prevention. *HIV Med*, *11*(8), 502-509. doi: 10.1111/j.1468-1293.2009.00818.x
- Kalichman, S. C., Eaton, L., White, D., Cherry, C., Pope, H., Cain, D., & Kalichman, M. O. (2007). Beliefs about treatments for HIV/AIDS and sexual risk behaviors among men who have sex with men, 1997-2006. *J Behav Med*, *30*(6), 497-503. doi: 10.1007/s10865-007-9123-6

- Kalichman, S. C., Nachimson, D., Cherry, C., & Williams, E. (1998). AIDS treatment advances and behavioral prevention setbacks: preliminary assessment of reduced perceived threat of HIV-AIDS. *Health Psychol*, *17*(6), 546-550.
- Kinsler, J. J., Wong, M. D., Sayles, J. N., Davis, C., & Cunningham, W. E. (2007). The effect of perceived stigma from a health care provider on access to care among a low-income HIV-positive population. *AIDS Patient Care STDS*, *21*(8), 584-592. doi: 10.1089/apc.2006.0202
- Kippax, S., & Race, K. (2003). Sustaining safe practice: twenty years on. *Soc Sci Med*, *57*(1), 1-12.
- Kosicki, G. M. (1993). Problems and Opportunities in Agenda-Setting Research. *Journal of Communication*, *43*, 2, 100-27.
- Lippmann, W. (2012). *Public opinion*. Mansfield Centre, CT: Martino Publishing.
- Mackellar, D. A., Hou, S. I., Whalen, C. C., Samuelsen, K., Valleroy, L. A., Secura, G. M., . . . Torian, L. V. (2011). A plausible causal model of HAART-efficacy beliefs, HIV/AIDS complacency, and HIV-acquisition risk behavior among young men who have sex with men. *AIDS Behav*, *15*(4), 788-804. doi: 10.1007/s10461-010-9813-x
- MacKellar, D. A., Hou, S. I., Whalen, C. C., Samuelsen, K., Valleroy, L. A., Secura, G. M., . . . Young Men's Survey Study, G. (2011). HIV/AIDS complacency and HIV infection among young men who have sex with men, and the race-specific influence of underlying HAART beliefs. *Sex Transm Dis*, *38*(8), 755-763. doi: 10.1097/OLQ.0b013e31820d5a77
- Milbury, K., Tannir, N. M., & Cohen, L. (2011). Treatment-related optimism protects quality of life in a phase II clinical trial for metastatic renal cell carcinoma. *Ann Behav Med*, *42*(3), 313-320. doi: 10.1007/s12160-011-9301-1
- Moore, R. D., & Chaisson, R. E. (1999). Natural history of HIV infection in the era of combination antiretroviral therapy. *AIDS*, *13*(14), 1933-1942.
- Palmisano, L., & Vella, S. (2011). A brief history of antiretroviral therapy of HIV infection: success and challenges. *Ann Ist Super Sanita*, *47*(1), 44-48. doi: 10.4415/ANN_11_01_10
- Persson, A. (2010). Reflections on the Swiss Consensus Statement in the context of qualitative interviews with heterosexuals living with HIV. *AIDS Care*, *22*(12), 1487-1492. doi: 10.1080/09540121.2010.482122
- Peterson, J. L., Miner, M. H., Brennan, D. J., & Rosser, B. R. (2012). HIV treatment optimism and sexual risk behaviors among HIV positive African American men who have sex with men. *AIDS Educ Prev*, *24*(2), 91-101. doi: 10.1521/aeap.2012.24.2.91

- Pollard, W.E. (2002). Use of consumer panel survey for public health communication planning: an evaluation of survey results. Proceedings of the American Statistical Association, Section on Health Policy Statistics, New York, 2002, pp. 2120-4.
- Purcell, D. W., Johnson, C. H., Lansky, A., Prejean, J., Stein, R., Denning, P., . . . Crepaz, N. (2012). Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates. *Open AIDS J*, 6, 98-107. doi: 10.2174/1874613601206010098
- Riley, G. A., & Baah-Odoom, D. (2012). Belief in a just world, generalised self-efficacy and stigma may contribute to unsafe sexual intentions via a reduced perception of vulnerability to HIV/AIDS amongst young people in Ghana. *AIDS Care*, 24(5), 642-648. doi: 10.1080/09540121.2011.630348
- Rodriguez, M. M., Madera, S. R., & Diaz, N. V. (2013). Stigma and Homophobia: Persistent Challenges for HIV Prevention Among Young MSM in Puerto Rico. *Rev Cienc Soc*, 26, 50-59.
- Rogers, E.M., & Dearing, J.W. (1988). Agenda-setting research: Where has it been, where is it going? In J.A. Anderson (Eds.), *Communication yearbook 11* (pp. 555–594). Newbury Park, CA: SAGE.
- Rogers, E. M., Dearing, J. W., & Chang, S. (1991). AIDS in the 1980s: The agenda-setting process for a public issue. *Journalism Monographs*, 126
- Rojas Castro, D., Fugon, L., Bourgeois-Fisson, E., Le Gall, J. M., Barbier, F., & Spire, B. (2012). The "Swiss Statement": who knows about it? How do they know? What are its effects on people living with HIV/AIDS? *AIDS Care*, 24(8), 1013-1019. doi: 10.1080/09540121.2012.668169
- Rowniak, S. (2009). Safe sex fatigue, treatment optimism, and serosorting: new challenges to HIV prevention among men who have sex with men. *J Assoc Nurses AIDS Care*, 20(1), 31-38. doi: 10.1016/j.jana.2008.09.006
- Schieman, S. (1998). Gender and AIDS-related psychosocial processes: a study of perceived susceptibility, social distance, and homophobia. *AIDS Educ Prev*, 10(3), 264-277.
- Smith, R. M., Carrico, A. W., Montandon, M., Kwena, Z., Bailey, R., Bukusi, E. A., & Cohen, C. R. (2011). Attitudes and beliefs about anti-retroviral therapy are associated with high risk sexual behaviors among the general population of Kisumu, Kenya. *AIDS Care*, 23(12), 1668-1675. doi: 10.1080/09540121.2011.579947
- Valdiserri, R. O. (2004). Mapping the roots of HIV/AIDS complacency: implications for program and policy development. *AIDS Educ Prev*, 16(5), 426-439. doi: 10.1521/aeap.16.5.426.48738

- Vanable, P. A., Ostrow, D. G., McKirnan, D. J., Taywaditep, K. J., & Hope, B. A. (2000). Impact of combination therapies on HIV risk perceptions and sexual risk among HIV-positive and HIV-negative gay and bisexual men. *Health Psychol, 19*(2), 134-145.
- Walgrave, S. and Van Aelst, P. (2006), The Contingency of the Mass Media's Political Agenda Setting Power: Toward a Preliminary Theory. *Journal of Communication, 56*: 88–109. doi: 10.1111/j.1460-2466.2006.00005.x
- Williamson, L. M., & Hart, G. J. (2004). HIV optimism does not explain increases in high-risk sexual behaviour among gay men in Scotland. *AIDS, 18*(5), 834-835.
- Wolff, L. S., Subramanian, S. V., Acevedo-Garcia, D., Weber, D., & Kawachi, I. (2010). Compared to whom? Subjective social status, self-rated health, and referent group sensitivity in a diverse US sample. *Soc Sci Med, 70*(12), 2019-2028. doi: 10.1016/j.socscimed.2010.02.033
- Wolitski, R. J., Valdiserri, R. O., Denning, P. H., & Levine, W. C. (2001). Are we headed for a resurgence of the HIV epidemic among men who have sex with men? *Am J Public Health, 91*(6), 883-888.
- Zillmann, D. (2006). Exemplification Effects in the Promotion of Safety and Health. *Journal of Communication, 56*: S221–S237. doi: 10.1111/j.1460-2466.2006.00291.x.
- Zytneck, D., Park, S., Onufrak, S. J., Kingsley, B. S., & Sherry, B. (2014). Knowledge of Sugar Content of Sports Drinks Is Not Associated With Sports Drink Consumption. *Am J Health Promot.* doi: 10.4278/ajhp.130916-QUAN-479

APPENDIX A

Analysized SpringStyles 2014 Items

The next few questions are about health. Below are a number of statements with which you may or may not agree. Please indicate how much you agree or disagree with each statement.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1	2	3	4	5

- HIV3. I would be uncomfortable having my food prepared by someone who has HIV or AIDS.
- HIV11. Homosexuality is acceptable to me.
- HIV15. I think HIV is a less serious threat than it used to be because of the available medications.

HIV8. On a scale of 1 to 10, where 1 is the least important and 10 is the most important, how would you rate the importance of HIV as a health problem facing this nation today?

Least important										Most important
1	2	3	4	5	6	7	8	9	10	

APPENDIX B

Emory IRB Determination



EMORY
UNIVERSITY

Institutional Review Board

June 11, 2015

Jocelyn Taylor
Emory University
Atlanta, GA 30322

RE: Determination: No IRB Review Required

eIRB#: 82044

Title: *Investigating the Public Agenda: Examining Factors Related to HIV/AIDS Complacency in a National Sample of U.S. Adults*

PI: Jocelyn Taylor

Dear Jocelyn:

Thank you for requesting a determination from our office about the above-referenced project. Based on our review of the materials you provided, we have determined that it does not require IRB review because it does not meet the definitions of research with "human subjects" or "clinical investigation" as set forth in Emory policies and procedures and federal rules, if applicable. This project intends to examine factors related to HIV/AIDS complacency in adults. Specifically, you will conduct secondary data analysis of market research data collected by Porter Novelli for the CDC. The dataset contains no identifying information and there is no possibility of re-identification, thus it is not considered to be "human subjects" data.

Please note that this determination does not mean that you cannot publish the results. If you have questions about this issue, please contact me.

This determination could be affected by substantive changes in the study design, subject populations, or identifiability of data. If the project changes in any substantive way, please contact our office for clarification.

Thank you for consulting the IRB.

Sincerely,

A handwritten signature in cursive script, appearing to read "CSims".

Carolyn Sims, MPA
Research Protocol Analyst