



Applying the Popular Opinion Leader Intervention for HIV to COVID-19

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The 2019 novel coronavirus disease (COVID-19) pandemic has demanded an immediate public health response and community-wide adoption of various behavior change strategies. Public health guidelines and recommendations emerged rapidly and have been modified as the pandemic has shifted. As a result, the public has received inconsistent and occasionally inaccurate information, contributing to misinformation and mistrust of public health recommendations [1]. As Jaiswal et al. have recently noted, the spread of medical mistrust and public health misinformation evident in the current COVID-19 pandemic mirrors long-standing challenges in the HIV epidemic [1]. Accordingly, we can take lessons learned from the HIV epidemic about the spread of public health information and its effects on behavior change apply them to the current pandemic. This Note focuses on social networks and the popular opinion leader model, which may be key in disseminating trusted information about COVID-19 in a rapidly changing public health landscape.

Social networks are critical in norm formation and behavioral adoption, and have been shown to impact a variety of public health outcomes, including HIV [2–5]. Since the early years of the HIV epidemic, social network interventions have been used to disseminate trusted information to vulnerable communities [6, 7]. Based on diffusion of innovation theory [8], the Popular Opinion Leader (POL) model posits that behavior change is achieved when new risk-reducing methods for HIV are disseminated by social network opinion leaders through their personal networks. As outlined by Kelly, the POL model identifies socially influential members of a population who have sufficient large social networks. These individuals are then trained in how to effectively communicate risk reduction strategies to their peers during everyday conversations and are able to establish momentum as a community social movement [9,

10]. Designed as a community-level intervention targeting gay and bisexual men, this intervention has demonstrated effectiveness at increasing HIV prevention knowledge and behaviors, facilitating PEP interest and uptake, and reducing HIV-related stigma [10–14].

Social network and POL interventions may be particularly applicable to other public health crises, including COVID-19. Similar to HIV, the early COVID-19 pandemic has been characterized by stigma, misinformation, and medical mistrust [1, 15]. Perceptions of blame, personal responsibility, and infection risk contribute to detrimental health outcomes and quality of life among affected individuals and those perceived to be at-risk. Furthermore, stereotypes and judgments about disproportionately affected groups can generate stigma and inform the public response to disease [16]. For example, asymptomatic individuals who are infected with coronavirus have been referred to as “carriers” [17] reminiscent of the narrative surrounding “HIV carriers” evident in the early years of the disease. This type of terminology can contribute to fear, public perceptions about who might be a “carrier,” and stigma about certain groups of people.

The COVID-19 outbreak began in Wuhan, China, which sparked early reports of racism and xenophobia toward Asian Americans in the United States (US). Since mid-March 2020, there have been over 1,700 reports of racism and xenophobia toward Asian Americans, including micro-aggressions and violent attacks [18]. In the months following, the concentration of diagnoses and deaths related to COVID-19 in African American and Latinx communities illuminated long-standing structural racism in the US [19, 20], and led to blame of Black individuals for high mortality rates within their communities [20]. Emerging data show stark racial disparities in COVID-19. For example, one analysis found that counties that had majority-Black-populations had COVID-19 infection rates three times that of majority-white counties [21]. Additionally, a Centers for Disease Control and Prevention analysis found that of nearly 1500 hospitalizations due to COVID-19, nearly one-third were among Black people, despite accounting for 18% of the population in the areas studied [22].

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Similar to the disparities evident in HIV/AIDS, the stark racial disparities in COVID-19 are rooted in systemic and contemporary racism and health and economic inequity that has made Black Americans more vulnerable to the virus. Stigma resulting from xenophobia or racism can limit access to accurate public health information, alienate communities from needed prevention and treatment resources, and further contribute to disparities in disease outcomes [23–25]. Similarly, misinformation about COVID-19 has emerged as a result of medical mistrust, which has also plagued the public health response to the HIV epidemic [13, 26, 27]. Medical mistrust is a primary driver of racial and ethnic health inequities [28] and can stem from historical and persistent racism, oppression, and disadvantage faced by people of color in the United States. Similar to what has been documented in the HIV literature [25–27, 29], medical mistrust may contribute to lack of COVID-19 testing, delayed access to needed medical care, and misinformation about COVID-19.

Yet, engaging trusted community leaders and social influencers to disseminate accurate public health information may help overcome these challenges to address inequities reduce COVID-19 stigma, and strengthen norms that contribute to sustained behavior change (e.g. social distancing, mask wearing, hand washing). Trusted influencers from within one's community who endorse COVID-19 prevention steps can add trust and credibility to public health messaging, particularly if there is mistrust of official authorities (e.g. medical system, public health departments, and state and local government). Our prior research has shown that peer endorsements and health advice from friends and members of one's social network are effective at facilitating population-level HIV behavior change [13, 30]. As we have demonstrated [13, 30], most community members want to help friends in a time of crises. Endorsements by popular opinion leaders within their social networks convey that health protective steps are possible, can reduce stigma, strengthen peer norms concerning the benefits of taking protective measures, and increase solidarity [5, 13, 30]. In racial and ethnic minority communities where medical mistrust is high [31, 32], advice from personally known and trusted individuals establishes information credibility and can help overcome mistrust and misinformation [33].

Applying the POL Model to COVID-19

Given our experience implementing the POL model with populations at risk for HIV, we are currently applying this model to communities being affected by COVID-19. As has been documented in many parts of the country, there are significant racial and ethnic disparities in COVID-19 in Milwaukee [34, 35]. Although 6.7% of Wisconsin's residents are Black, they have comprised 21% of confirmed

COVID-cases and 29% of COVID-related deaths. Additionally, over 30% of COVID cases are among individuals who identify as Hispanic or Latino, although they represent just 6.9% of the state's population [35].

With funding from the Advancing a Healthier Wisconsin Endowment, our project, *1000 Hometown Heroes*, aims to engage 1000 local "heroes" in Milwaukee from predominantly African American and Latinx communities in an effort to address the racial and ethnic disparities in COVID-19. These 'heroes' are social influencers and leaders on various social media platforms who will share accurate, culturally relevant, tailored information about COVID-19 with their networks. We are recruiting POL who see themselves as change agents, want to help protect the health and psychosocial well-being of others in their communities, and are willing to spread the word about COVID-19 prevention and reduce disease stigma. Additionally, we are providing influencers information to connect community members to needed services, provide strategies to cope with stress, anxiety, and social distancing, and provide accurate, up-to-date information about the status of COVID-19 in the Milwaukee area. Aligned with social distancing guidelines for COVID-19 prevention, we are using online social networks as an efficient and effective way to disseminate accurate information and influence community norms and behaviors [36]. The POL model has been successfully adapted to online networks, allowing peer influencers to reach a large number of people in a cost-effective approach [37].

In many ways, this approach is a modernization of efforts implemented during the 1918 flu pandemic. Postal workers, Boy Scouts, and teachers, as trusted community members, were asked to volunteer for health education campaigns and go door-to-door to educate families about public health practices [38]. With the advent of numerous social media platforms, we now have an opportunity for more efficient information spread from a larger segment of the population. Over the next six months, we will be evaluating the program's reach and effectiveness, which may provide some early indication about how to quickly disseminate accurate, trusted information during public health crises, particularly to communities hardest hit by an epidemic.

Adapting the popular opinion model, which has demonstrated significant success in HIV prevention, to COVID-19 is one example of how HIV prevention and intervention researchers can take lessons learned in HIV and apply them to current and future pandemics. While much of our current HIV research is on hold indefinitely, we have an opportunity to pivot and use what we have learned from nearly four decades of HIV research to assist in addressing the impact of COVID-19. We have a wealth of knowledge about infectious disease, stigma, sustained behavior modification, and social and structural facilitators of health disparities that should

be adapted and shared to address other emerging infectious diseases.

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