Changes in Public Perception Alter the Spread of Epidemics: A case study of HIV/AIDS in the United States

Evan A. Old '26

Introduction

Recent studies have isolated government policy as a crucial variable in the responses to epidemics.[1] Although government policy is understood to impact the spread of epidemics, it is unknown how public perception of an epidemic contributes to the fight against transmission and spread. To find how public perception affects the spread of epidemics, a case study approach that focuses on the spread of acquired immunodeficiency syndrome (AIDS) in the United States is selected. At the beginning of the AIDS epidemic, the virus was thought to be connected to men who have sexual contact with other men (MSM).[2] The spread of the AIDS epidemic is unique because the virus was traditionally perceived as affecting a marginalized subset of the population. This paper takes a qualitative survey of public perception of AIDS throughout the epidemic in the United States and will propose a mechanism by which changes in public perception can alter the future of an epidemic. The paper begins by mapping the public perception of AIDS at the beginning of the epidemic. The paper then focuses on changes to public perception and will show how public perception of the AIDS epidemic changed as the epidemic progressed. Finally, the paper analyzes the correlation between public perception and infection rates during the AIDS epidemic and attempts to propose a mechanism by which public perception affects the rate of AIDS transmission. This paper aims to show that change in public perception is proportional to the spread of epidemics.

History

The AIDS epidemic in the United States faced a unique response from the public. In the early days of the AIDS epidemic, officials were puzzled and confused by many young, otherwise healthy, gay men who were falling ill with rare types of cancer. Although Kaposi Sarcoma killed these young men at an alarming rate, the cancer seemed to manifest specifically in communities of gay men. Although healthcare officials were confused by the mechanism by which these young men fell ill, they understood Kaposi Sarcoma to be highly correlated with MSM. Headlines in newspapers announced the correlation between the cancer and MSM communities. By the time the public heard about Kaposi Sarcoma 2)infections in young men, the disease had been dubbed a 'Homosexual Disorder'.[3] In 1981 the term 'gay cancer' had entered the public vocabulary.[4] On May 11th, 1982, the New York Times identified the epidemic as Gay-Related Immune Deficiency (GRID). Later in 1982, Phillip Burton (a representative from California's 6th district) introduced a bill to secure federal funding for research into acquired immune disorders and related opportunistic infections (H.R.7192).[5] H.R.7192 never passed the house committee of appropriations. The C.D.C first referred to the epidemic as Acquired Immune Deficiency Syndrome (AIDS) in September of 1982.[6] Although cases of AIDS had been found in patients who had received blood transfusions, the public largely believed AIDS was connected to MSM. The Initial perception that AIDS was solely linked to the gay community harmed efforts to secure funding to combat the epidemic. Because AIDS was rarely found outside gay communities in the United States, the public remained largely unconcerned with researching treatments for the epidemic. The first federal funding for AIDS research was secured on May 18, 1983. In 1983 several case studies of AIDS cases in women and children were published by the C.D.C.[7] Although scientific research into AIDS had begun, the fight against stigmatic public perception of the AIDS epidemic would continue indefinitely. As scientific discoveries yielded advanced treatment of AIDS, public perception of the epidemic lagged.

Highly publicized AIDS cases and testimonials worked to change what scientists could not—public perception. Over the course of the next decade deaths of celebrities and children from AIDS began to challenge the stigmas surrounding the AIDS epidemic. On July 15th, 1985, actor Rock Hudson announced he had AIDS. Hudson, a popular actor, was the first Hollywood celebrity to publicly acknowledge he was suffering from AIDS.[8] Hudson's announcement touched the community and humanized AIDS victims.[9] Following Hudson's death in 1985, AIDS received an increase in publicity and

[1] (Hatzenbuehler 2020)

[2] (Altman, New Homosexual Disorder Worries Health Officials 1982)

[3] (Altman, RARE CANCER SEEN IN 41 HOMOSEXUALS 1981)

[4] (Altman, New Homosexual Disorder Worries Health Officials 1982)

[5] (Rep. Burton 1982)

[6] (CDC 1982)

[7] (HIV.gov 202)

[8] (Harmetz 1985)

[9] (Britannica 2022)

research funding from benefit events.[10] In 1984 an Indiana teenager named Ryan White was diagnosed with AIDS following a blood transfusion. He lived 4 years following his diagnosis. In the four years following his diagnosis, Ryan White became a public figure in the fight against AIDS discrimination.[11] Ryan's fight to attend school gained national publicity for the AIDS epidemic and combatted the stigma that AIDS only affected MSM. The heavily publicized campaigns associated with celebrity AIDS victims slowly shifted attitudes of the public. These changes in social perception of the epidemic led to public outrage. The public rallied around causes like Ryan White's fight to attend school. AIDS was no longer seen as a distant disease that only affected MSM. Ryan's death in April 1990 deeply upset the nation and led congress to pass the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act in August 1990.[12] By 1990, public perception had begun to shift, and AIDS was no longer universally regarded as a gay disease. Although progress had been made by publicizing the AIDS epidemic, stigmas continued to surround the epidemic.

Mechanisms

To understand the impacts of stigmas that currently surround the AIDS epidemic, this paper aims to propose a method by which negative public perception is linked to an increase in HIV/AIDS transmission. It has been found that "States with higher levels of structural stigma related to sexual orientation had higher rates of HIV criminalization enforcement than states with lower levels of structural stigma".[13] Previous research has shown that HIV positive individuals have better health outcomes in States that have policies that protect sexual minorities.[14] In areas where HIV/AIDS is criminalized, social stigmas are common.[15] Previous studies have also shown that efforts to reduce lingering social stigmas surrounding HIV/AIDS infections in underserved communities help HIV prevention efforts by encouraging individuals to seek regular testing.[16] Based on the data provided by these studies, the paper posits that social stigmas and HIV/AIDS criminalization in a community lower an individual's likelihood to get tested for HIV/AIDS. If an individual is less likely to get tested for HIV/AIDS, they face a greater risk of transmitting the virus to other individuals. Based on evidence found in previous studies (Britt Rios-Ellis et al, Nguyen K. Tran et al) the proposed mechanism is supported.

Alternatively, public perception could influence the spread of epidemics via publicly allocated research funding. Research is an integral factor in the outcomes of epidemics. As seen during the COVID-19 pandemic, well-funded and publicly supported research into therapies and vaccines can greatly benefit the population impacted by the epidemic. In the early days of the AIDS epidemic publicly funded research was nonexistent until Congress allocated federal funding in May 1983. Federally allocated funding research escalated the search for the virus that was causing AIDS. Once HIV was discovered the focus shifted from identification of the virus causing the epidemic to a search for effective therapies. Today there are several effective therapies for HIV/AIDS. The relationship between public perception of a virus and allocated research funding has not been studied and therefore is unknown.

Finally public perception could impact a population's willingness to receive vaccinations or therapies. Recent research into the COVID-19 pandemic isolated a correlation between political affiliation and mortality rates from COVID-19.[17] Studies into mortality rates during the COVID-19 pandemic found that districts that voted republican experienced higher mortality rates during the COVID-19 pandemic.[18] This research suggests a correlation of mortality based on the individual's beliefs. Research ascribed this correlation to the politicizing of vaccines and showed that vaccine skepticism caused negative outcomes in COVID-19 patients.[19] Although not relevant to the discussion of HIV/AIDS further research pertaining to current or recent pandemics could isolate a correlation between public perception and willingness to be inoculated against viruses.

Research into the HIV/AIDS epidemic found evidence for the first mechanism, but further research could find any of the proposed mechanisms statistically significant. Any of the three proposed mechanisms could explain a correlation between social perception and the spread of epidemics.

[10] (Harmetz 1985)

[11] (Health Resources & Service Administration 2022)

[12] (Health Resources & Service Administration 2022)

[13] (Tran 2019)

[14] (Hatzenbuehler 2020)

[15] (Tran 2019)

[16] (Rios-Ellis 2015)

[17] (Wallace 2022)

[18] (Wallace 2022)

[19] (Wallace 2022)

Analysis

Research into the HIV/AIDS epidemic exploring the correlation between public perception and the spread of epidemics found evidence to support the hypothesis that social perception affects how viruses spread amongst populations. Social stigmas associated with viruses lead to negative outcomes for patients. Criminalizing policies and negative stigmas were found to decrease an individual's likelihood of getting tested for HIV/AIDS. As the United States continues to combat the HIV epidemic, policymakers and government officials should consider reforming policies that shed HIV infection in a negative light. Based on the research in this case study HIV/AIDS criminalizing policies had negative outcomes on patients and public perception. Given that public perception is an influencing factor in efforts to influence the spread of viruses, public health initiatives should include efforts to reduce stigmas surrounding the epidemics.

Conclusion

This paper argued through a qualitative study of HIV/AIDS public perception that negative public perception suggests causation of negative outcomes in transmission rates and survivability. This conclusion was based on changes in public perception of HIV/AIDS infection that occurred during the early days of the epidemic and previous research that found HIV criminalizing policies to have negative effects on patients living with HIV. Based on the findings of the paper, efforts to curb the effects of an epidemic should factor in social perception as a critical variable. Combating the spread of epidemics takes an interdisciplinary approach, and researchers should consider the effects of stigmas and general perceptions on the spread of viruses.

REFERENCES

Altman, Lawrence K. 1982. "New Homosexual Disorder Worries Health Officials." *The New York Times*, May 11: 1,C6.

—. 1981. "RARE CANCER SEEN IN 41 HOMOSEXUALS." *The New York Times*, July 3: Section A, page 20.

Britannica. 2022. *Rock Hudson.* November 13. https://www.britannica.com/biography/Rock-Hudson.

CDC. 1982. "Current Trends Update on Acquired Immune Deficiency Syndrome (AIDS) – United States." *MMWR .* September 24. https://www.cdc.gov/mmwr/preview/mmwrhtml/00001163.htm.

Harmetz, Aljean. 1985. "HOLLYWOOD TURNS OUT FOR AIDS BENEFIT." *The New York Times*, September 20: Section A, Page 15.

Hatzenbuehler, Mark L. 2020. "Trends in State Policy Support for Sexual Minorities and HIV-Related Outcomes Among Men Who Have Sex With Men in the United States, 2008-2014 ." *Journal of Acquired Immune Deficiency Syndrome* 39-45.

Health Resources & Service Administration. 2022. *Who Was Ryan White?* February . https://ryanwhite.hrsa.gov/about/ryan-white.

Herek, Gregory M. 2002. " HIV-Related Stigma and Knowledge in the United States: Prevalence and Trends, 1991-1999." *American Journal of Public Health* 371-377.

HIV.gov. 2022. *A Timeline of HIV and AIDS.* May. https://www.hiv.gov/hiv-basics/overview/history/hiv-and-aids-timeline#year-1983.

Hoppe, Trevor. 2014. " From Sickness to Badness: The Criminalization of HIV in Michigan." *Social Science & Medicine* 139-147.

Wallace, Jacob. 2022. "EXCESS DEATH RATES FOR REPUBLICANS AND DEMOCRATS DURING THE COVID-19 PANDEMIC." *NBER Working Paper Series* No. 30512.

Pollock, Philip H. 1994. "Issues, Values, and Critical Moments: Did "Magic" Johnson Transform Public Opinion on AIDS?" *American Journal of Political Science* 426-46.

Rep. Burton, Phillip [D-CA-6]. 1982. "H.R.7192 - A bill to appropriate funds for basic scientific and medical research on acquired immune disorders and related opportunistic infections." *Congress.gov.* September 28. https://www.congress.gov/bill/97th-congress/house-bill/7192/all-info?r=12.

Rios-Ellis, Britt. 2015. "Evaluation of a Community Health Worker Intervention to Reduce HIV/AIDS Stigma and Increase HIV Testing Among Underserved Latinos in the Southwestern U.S." *Public Health Reports* 458-467.

Tran, Nguyen K. 2019. "Potential Relationship Between HIV Criminalization and Structural Stigma Related to Sexual Orientation in the United States." *Journal of Acquired Immune Deficiency Syndrome* e106-08.