

## **Mini-Grant Project**

LGBTQ+ is an acronym for various groups, including lesbian, gay, bisexual, transgender, and queer. The term gay describes a homosexual woman or man, and lesbian defines a homosexual woman. Transgender is an individual oriented to a different gender that does not match the biological one (Hafeez et al., 2017). Bisexual describes a person who has a sexual attraction to both sexes. The term queer means someone who doesn't feel the term gay, lesbian, bisexual, or transgender fits them but still identifies as non-heterosexual. There is scarce information about the population for lack of adequate questions about sexual identity in state and national surveys. Therefore, inadequate data is available to estimate their numbers and the healthcare challenges they encounter. The LGBTQ+ population is at increased risk than other populations for poor health outcomes, healthcare disparities, and social inequities (Hafeez et al., 2017). This mini-grant aims to highlight the impact of HIV on the LGBTQ+ population.

The LGBTQ+ groups, especially the youth, are most likely to adopt high-risk sexual behaviors that predispose them to high rates of STDs (sexually transmitted diseases). The populations record twice as high the prevalence of HIV (human immunodeficiency virus), Chlamydia, and gonorrhea as heterosexual males. The problem emerges from family rejection and peer victimization, forcing the youth to engage in high-risk sexual activities (Hafeez et al., 2017). There is also a lack of comprehensive sex education, and LGBTQ+ persons may be more scared to seek healthcare or testing due to fear of stigmatization. The grant project will focus on the preventive strategies implemented among the LGBTQ+ youth population targeting middle and high school learners. The project will benefit approximately 1.3 million children representing 8% of the total high school population (Schlanger, 2017).

## **Problem Statement**

The LGBTQ+ population encounters discrimination, stigma, and racism, hindering access to healthcare services as their straight counterparts. Bisexual and gay men populations are impacted most, with HIV accounting for 66% of identified cases yearly (CDC, 2021). The most affected bisexual and gay men include those of Hispanic/Latino and African American descent. Race is essential to examine with HIV infections because the rate of infection reduced among the White bisexual and gay population but remained the same in African American and Hispanic/Latino groups (CDC, 2021). The rate of HIV diagnoses among the LGBTQ+ groups decreased from 2015 to 2019 (U.S. Department of Health & Human Services, 2022). The diagnosis levels varied with an ethnic group. An estimated 13% of individuals with HIV living in the United States do not know about their status, which hinders HIV management. Bisexual and gay men should have HIV testing every 3 to 6 months (U.S. Department of Health & Human Services, 2022).

The CDC (Centers for Disease Control and Prevention) recommends universal non-risk-based HIV screening among all youths aged 15 and older (Miller et al., 2017). The approach applies in clinical environments, including the emergency departments, community health centers, and sexually transmitted disease clinics. Nonetheless, only 0.6% of youth aged between 15 and 19 undergo HIV screening (Miller et al., 2017). The LGBTQ+ have lower access to these resources for fear of stigma and hostility toward them because of their sexual orientation (Miller et al., 2017). From this perspective, the topic of HIV in the LGBTQ+ group is vital because most of these individuals suffer because of their sexual orientation. Like other people in the United States, they have a right to receive HIV services to reduce the transmission rate and improve health outcomes. The problem of HIV is addressed when people engage in diagnosis that helps start early treatment and preventive measures.

## **Purpose**

The grant project will implement a health promotion program focusing on HIV preventive strategies. The program will increase screening rates among LGBTQ+ youths in middle and high school students, resulting in timely intervention and a decrease in new infection rates.

## **Goals and Objectives**

The program's goals include increasing HIV screening among LGBTQ+ students in middle and high schools and increasing the uptake of preventive and treatment strategies, including HIV preventive drugs.

The program's objectives encompass decreasing new HIV infections among LGBTQ+ students in middle and high schools by 20% and increasing healthcare services utilization by the LGBTQ+ youth by 50%.

## **Review of Literature**

### **a. Epidemiological facts and statistics**

Various factors affect the epidemiology of HIV, including the level of prevention activities and the efficacy of HIV care methods (D'Souza et al., 2019). The first case of HIV, which had advanced to AIDS (acquired immune deficiency syndrome) in the United States, was detected in a gay sex worker called Ken Horne in 1980 (Ayala & Spieldenner, 2021). The CDC identified five cases involving *Pneumocystis pneumonia* among young homosexual males residing in Los Angeles one year after the first case. The healthcare professionals and the public perceived a connection between homosexuality and HIV leading to the use of gay-related immune deficiency to describe the disease in 1982 (Ayala & Spieldenner, 2021).

Since the 1980s, HIV has continued to affect the gay and bisexual community more than other populations. The 2010 to 2019 statistics reveal an increase of 25% in HIV diagnoses among bisexual and gay men. The percentage represents 70% of new HIV infections annually, constituting 25% Latinos and 31% African Americans (Ayala & Spieldenner, 2021). The prevalence of HIV infection in transgender persons and minority men remains high in the United States regardless of public efforts to improve public health response to HIV. Youths account for 21% of new HIV diagnoses in the United States. The groups affected more by the health condition are the LGBTQ+ youths from communities of color, those in institutional environments, incarcerated, and the homeless (Fernandez et al., 2021; Gleason et al., 2021).

The number of HIV infections has doubled in the last 15 years in youths aged 13 and 24 years in the United States. The youths have less antiretroviral therapy (ART) use, serostatus awareness, and treatment adherence than adults. At least 60% of the youth are undiagnosed, which hinders appropriate care for persons with HIV infection. Antiretroviral therapy (ART) and close monitoring promote viral suppression leading to longer life and decreased mortality (Fernandez et al., 2021). An estimated 68% of HIV-positive youth get linked to care within a month after diagnosis. At least 98% of the youths in care initiate treatment using ART, and 89% achieve viral suppression in one year. However, the suppression rates reduce in five years, as indicated by 16% of the youths with viral suppression. The rate is lower than 58% in adults, implying an inadequate connection to care among the youth (Fernandez et al., 2021).

The youths living in the urban centers are affected more than their rural counterparts in the United States. The CDC (2022) statistics disclose that HIV infection is rapid in metropolitan regions with at least 500,000 people and above. The Northeast area has a higher number of people with HIV compared to the South. The statistics also revealed young bisexual and gay men

had 5161 new HIV infections representing 84% of all infections in individuals aged between 13 and 21 in 2020. About 53% of the new infections in LGBTQ+ groups in 2020 involved African American gay and bisexual men (CDC, 2022).

### **b. Significance of HIV and impact on LGBTQ+ health**

HIV among the LGBTQ+ community needs attention because the group has a high burden of the disease despite the advancements in medications and testing. The population faces antigay stigma, which is a primary determinant of vulnerability. The youth in middle and high schools are greatly affected because of antigay bias in such settings resulting in many incidents of violence and harassment by their peers (Cahill & Valadéz, 2022). Also, the antigay bias hinders HIV testing and treatment because the victims fear harassment from medical practitioners. HIV infection makes LGBTQ+ individuals more vulnerable as they encounter poor health outcomes due to a lack of proper treatment. As a result, LGBTQ+ people develop risky behaviors like having unprotected sex and health problems such as depression, social isolation, and suicidal ideation (The Human Rights Campaign, 2017). Living with HIV is traumatic for the LGBTQ+ groups, which explains why they develop mental illnesses, including anxiety, shame, and emotional distress. The development of other mental and physical disorders makes treatment difficult because of poor HIV prognosis and therapy adherence (Armoon et al., 2022).

### **Epidemiological Framework**

The epidemiological triangle describes factors leading to disease development, constituting the external agent, a vulnerable host, and the environment. The three factors facilitate the interaction between the agent and host. The model explains how illness develops through interacting with a susceptible host, pathogen, and environment (Tsui et al., 2020). The triangle model presumes that the environment, host, and agent dimensions have complex

relationships that lead to disease development. The agent defines the infectious microbe, parasite, bacterium, or virus (Tsui et al., 2020). Also, the aspect of the agent comprises physical and chemical triggers of injury or ailment. The element is critical in the pathogenesis of the disease. However, the agent's presence does not guarantee the transmission of disease. Various factors moderate the development of disease. They encompass the agent's potential to cause illness and the quantity (Tsui et al., 2020).

The host defines the patient who is susceptible to disease. The intrinsic or risk factors make a host susceptible to a causative pathogen. Opportunities such as high-risk sexual behaviors play a significant role in disease development (Tsui et al., 2020). Also, personal choices impact disease acquisition. The choices are affected by gender and age. Other influential elements include the psychological composition, medications, anatomic structure, nutritional status, and presence of illness that determine the level of susceptibility and response to a bacterium (Tsui et al., 2020).

The environment explains the extrinsic elements influencing the chances of exposure and the agent. The environment entails socio-economic aspects like access to healthcare services, sanitation, climate, biological and geology factors. The epidemiological triangle is illustrated below:

Fig. 1 Epidemiological triangle

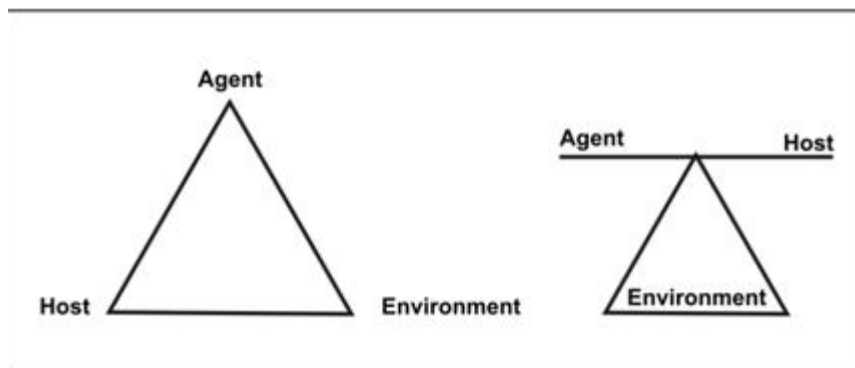


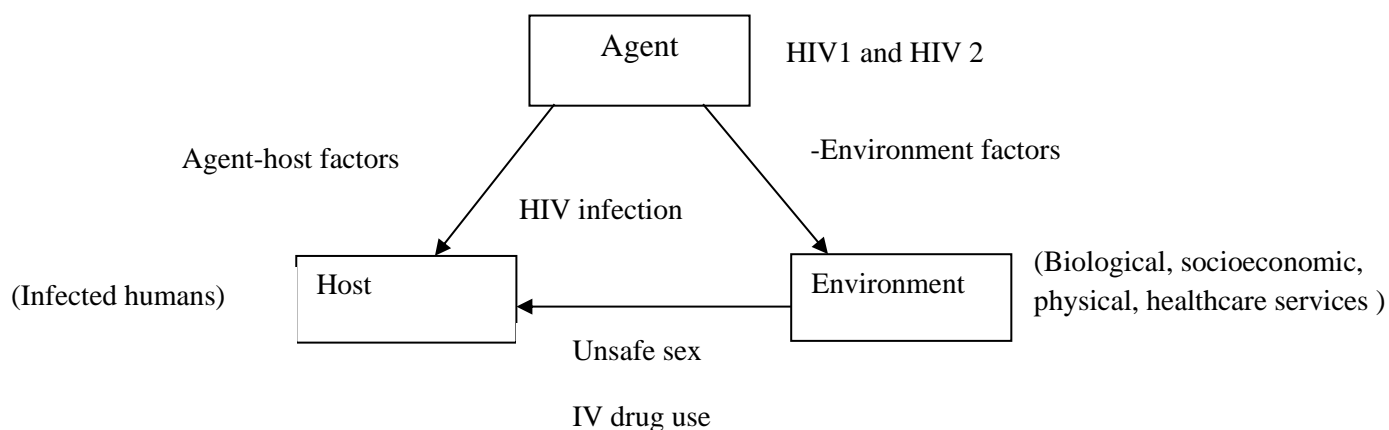
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<https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section8.html#:~:text=Causation,the%20host%20and%20agent%20together.>

### Application to the project

The epidemiological triangle explains how the LGBTQ+ population acquires HIV infection. Various factors play a role in HIV development, including the agent, which comprises HIV 1 and 2 viruses. The environment comprises a lack of access to healthcare services and socio-economic, physical, and biological elements. The host includes the humans.

Fig. 2 HIV epidemiological triangle for LGBTQ+



The epidemiological triangle comprises three elements. They include the host, agent, and environment. The host includes intrinsic factors such as the viral load, making an individual more susceptible to HIV infection (Chen et al., 2020). The host element recognizes all hosts, including the intermediate, paratonic, definitive, and reservoir. HIV infection transmits from one person to another through contact with infected bodily fluids such as breast milk, vaginal fluids, semen, and blood (CDC, 2022a).

The practices that facilitate the spread of HIV entail sharing syringes, needles, and vaginal and anal sex. Anal sex is considered to hold the highest risk for HIV transmission. The risk is associated with the rectum's lining characteristics. The thin lining permeates the HIV to penetrate the body during anal sex. Besides, having open sores or cuts increases the chances of getting HIV (CDC, 2022a).

The environment includes access to healthcare services. The LGBTQ+ population has an increased risk for HIV infection because of inadequate utilization of healthcare services. As a result, they lack adequate screening and treatment using antiretroviral treatment needed to maintain an undetectable viral load (Chen et al., 2020). Most LGBTQ+ individuals do not seek medical help for various reasons, including economic deprivation, stigma, and violence. These social disadvantages increase the incidence of HIV infection in this population (Chen et al., 2020).

The agent factor includes HIV 1 and 2 responsible for HIV infection. The HIV-1 changed from non-human primate immunodeficiency virus originating from Central African chimpanzees (SIVcpz), and HIV-2 developed from West African sooty mangabeys (SIVsm) (Blood, 2016). A majority of HIV infections are a result of HIV-1 (Vidya Vijayan et al., 2017). HIV-1 and HIV-2 have similar biological and genetic qualities, including mechanisms for transactivation, genome structure, and CD4 cell depletion. The viruses affect the CD4+ T-cells, the primary immune response in humans because they coordinate the humoral and cellular immune reactions against infections. The HIV-1 and two viruses attack the CD4 T-cells and kill them, causing a decrease in immunity and progression of HIV infection (Vidya Vijayan et al., 2017).

The analysis of the epidemiological triangle reveals the risk factors making the LGBTQ+ population vulnerable to HIV infection, including the presence of the HIV-1 or 2 viruses. The



virus is not enough to cause the infection but requires an environment making the transmission possible. Lack of medical care services denies people a chance to know their HIV status, making them viable host reservoirs. Opportunities such as unsafe sex practices increase the chances of HIV infection through contact with infected bodily fluids.

### **Healthy People 2030 Goals and Objectives**

The mini-grant focuses on achieving a specific Healthy People 2030 goal and objective, which revolves around healthcare access and quality and focuses on increasing access to comprehensive, high-quality healthcare services (Healthy People 2030, n.d). Health People 2030 recognizes the plight of many Americans without access to quality health care services. Health care access problem is partly attributed to the lack of health insurance. According to Healthy People 2030 (n.d), at least 1 out of 10 people in the United States have no health coverage. Subsequently, they do not receive the required medical care from various providers as they cannot afford to pay for the service and drugs. In other instances, access to medical services is a problem because of the distance traveled to reach healthcare providers. Lack of access to the necessary health care services delays screening and treatment and causes poor health outcomes (HealthyPeople2030, n.d). The U.S healthcare system is affected by the challenge because it continues to experience a high burden of preventable illnesses.

In addition, the Healthy People 2030 goal supports implementing interventions that improve access to healthcare providers and communication through remote or in-person modes. The goal also aims at increasing the number of people receiving appropriate healthcare. The selected Healthy People 2030 goal has various objectives. However, this mini-grant will focus on one objective titled AH-01. AH-01 recommends increasing the number of adolescents with access to preventive healthcare visits in the past year (HealthyPeople2030, n.d). This mini-grant

project focus on HIV infection among LGBTQ+ youths in middle and high schools. There is adequate evidence disclosing the population does not access the necessary HIV services because of discrimination and stigma (Miller et al., 2021).

Miller et al. (2021) also note that strategies addressing self-stigma create demand for healthcare services as individuals participate in health promotion activities. From this perspective, applying Healthy People 2030 objective AH-01 will increase the proportion of LGBTQ+ individuals seeking medical care from appropriate healthcare institutions.

Accordingly, the number of youths aware of their HIV status will increase, translating to the initiation of proper treatment interventions resulting in improved health (Miller et al., 2021).

Objective AH-01 will achieve the project's purpose: to increase the screening rates among LGBTQ+ youths in middle and high schools, enhance timely intervention, and reduce new infection rates. Besides, it will facilitate the realization of the project's goal to increase HIV screening among LGBTQ+ students in middle and high schools and increase the usage of preventive and treatment strategies like HIV preventive drugs. Likewise, it will enhance the achievement of the project's objective to reduce new HIV infections in the same population by 20% and expand access to healthcare services by the LGBTQ+ youth by 50%.

## **Methodology**

### **Level of Prevention**

The project will implement a secondary prevention level, entailing interventions to promote early detection and therapy. The intervention helps individuals to start treatment on time. The population of interest in this level of prevention includes young LGBTQ+ persons at high risk of HIV. The approach entails screening interventions that reduce the risk of exposure or

increase immunity in predisposed individuals to avoid disease progression to subclinical disease (Kisling & Das, 2021).

### **Population-based Intervention**

The secondary prevention will comprise a population-based intervention. It will constitute screening activities among LGBTQ+ youth in middle and high schools. Human Immunodeficiency Virus (HIV) is a disease contracted through sexual contact with an infected person (Cohen et al., 2019). The screening will increase awareness of HIV status among LGBTQ+ youth. Youths with high exposure to HIV will benefit from screening because they will receive early treatment, including pre-exposure prophylaxis. The US CDC approved the drug in 2012 and used specific guidelines in its administration to guarantee effectiveness (Cohen et al., 2019). Therefore, HIV screening will enhance the realization of the Healthy People 2030 goal and objective by increasing the number of LGBTQ+ with access to screening services.

### **Activities**

The activities to achieve the Healthy People 2030 objective of promoting access to comprehensive, high-quality health care services are listed below.

#### ***Effective leadership***

Leadership by the senior management and the governing body is necessary for ensuring the development of appealing healthcare culture. Leadership facilitates the development of a trusting relationship between the LGBTQ+ population and the healthcare system. An enabling setting is encouraged to guarantee the realization of effective leadership in preventive care (National LGBTQIA+ Health Education Center, 2021).

#### ***Organizational policies safeguarding LGBTQ+***

There is a long history of discrimination among the LGBTQ+ population in healthcare environments. The development and implementation of non-discrimination policies will ensure the healthcare environment discourages discrimination and implements changes eliminating the use of defaming terms when referring to gender identity. The policies are expected to reduce the fear experienced by the population and create a sense of recognition and acceptance in the medical field (National LGBTQIA+ Health Education Center, 2021).

### ***Staff training on affirming care and communication***

The project will include staff training to promote respectful communication with individuals from the LGBTQ+ population. The training focuses on LGBTQ+ health disparities and communication. Staff implementing the project will receive training to empower them with skills and competencies sensitive to the needs of the LGBTQ+ population (National LGBTQIA+ Health Education Center, 2021).

### ***Partnership with the LGBTQ+ population***

The final activity includes a partnership with the LGBTQ+ population. Collaborating with local LGBTQ+ individuals and communities will promote awareness of the project's dedication to working with the population. The development of close association and partnership with the LGBTQ+ population will enhance access to information about HIV prevention and healthcare services (National LGBTQIA+ Health Education Center, 2021).

### **Step-by-step**

The project implementation entails three steps, as outlined below.

#### ***Formation of an implementation team***

The first step constitutes forming an implementation team comprising healthcare professionals, including nurses and physicians working with the LGBTQ+ population. The team

will execute the project in healthcare settings providing medical services to the LGBTQ+ population. The team will work with youths in middle and high schools by providing training intended to create awareness of HIV and the significance of screening in protecting the population against adverse health outcomes associated with HIV. Besides, the team will plan the entire implementation exercise, document all activities, and analyze data to establish if the project accomplished its purpose, objective, and Healthy People 2030 goal. The project leader will select the team by inviting interested healthcare professionals to volunteer. The process will last two months to ensure adequate communication between the project manager and the prospective team members and select the right team.

### ***Identification of Stakeholders***

The second step entails the identification of stakeholders who will support the implementation of the project. They include community parties such as healthcare organizations, middle and high schools, healthcare professionals, not-for-profit organizations, and government public health departments. Healthcare organizations in local areas will contribute to the project's success by providing healthcare professionals and settings for HIV screening among the LGBTQ+ population. The government public health department will provide guidelines on incorporating the project with current health promotion programs (Pollack Porter et al., 2018). Other stakeholders are the Middle and high schools that will enhance access to LGBTQ+ youths. The learning institutions will help the project implementation team to access the target population. The not-for-profit organizations will provide resources such as financial funding to make the project successful (Carroll-Scott et al., 2017). The project manager and the team will identify stakeholders from the area. The project will benefit all learners affiliated with the LGBTQ+ population in middle schools, high schools, and tertiary institutions. Selecting the

stakeholders requires three months to ensure adequate time for approval and consent to perform the project in the student population.

### ***Recognizing Measures***

The third step comprises project implementation of HIV screening among the LGBTQ+ population. The screening phase will last 5 months to give the learners adequate time to learn about its importance and decide to participate. The screening procedure will be voluntary, and the healthcare professionals will oversee the screening and administration of prophylaxis in youths suspected to be exposed to HIV infection.

The measures of success or failure of the project will depend on the extent to which it meets the Healthy People 2030 goal and objective. An increase in HIV screening services by the LGBTQ+ youth is evidence of success. Eventually, the LGBTQ+ young persons in contact with the project will document a decrease in HIV infections and improved health outcomes than those without the encounter.

The team will establish the project's performance within a month by comparing the infection rate before and after its implementation. The findings will enable the team to decide whether there is a need for adjustments and continue with the project for the next 11 months and 1 month for data analysis. Thus, the entire project will last two years. The results at this stage will establish the effectiveness of screening as a secondary level of prevention.

The Healthy People 2030 goal laying the foundation of focus for the mini-grant project will improve preventive care among LGBTQ+ youths. A focus on the plan will ensure the vulnerable population benefits from HIV screening and treatment available to their counterparts with heterosexual identities.

### **Level of Funding**

The mini-grant project will implement a secondary prevention intervention to increase HIV screening among LGBTQ+ students in middle and high schools. Therefore, the budget covers secondary prevention activities. The cost of HIV tests depends on the setting where the screening occurs and the type of testing. The project will employ the RDS (respondent drive sampling) based social network (SN) method that targets young African-American men who have sexual engagements with men (Skaathun et al., 2020). However, the approach will apply to all target populations from a diverse ethnic backgrounds. Also, the project will use routine screening common in the outpatient and inpatient setting.

The RDS will use index cases identified from middle and high schools. The participant will self-identify as LGBTQ+ and report having sexual contact in the past two years. Each participant will receive five vouchers to recruit social network members meeting the criteria of LGBTQ+. The participants will receive an incentive of \$60 for a baseline interview and \$20 for everyone who enrolls in the social network as a member. The HIV screening will employ multisport HIV-1/HIV-2 Bio-Rad, ARCHITECT HIV Ag/Ab Combo, and Realtime HIV-1RNA. The budget comprises various costs incurred in paying remuneration to the support and direct service staff. The cost is computed using the U.S. Office of Personnel Management's hourly rate of pay advisor. The fee included fringe benefits estimates at 23.2% of the professional fee. Training includes educating the team members about the screening processes and implementation phase. The training expenses are covered in capital and are anticipated to reduce as the program advances. HIV testing cost was standardized to include \$8.83 per blood test and \$10 per rapid point-of-care test. The material costs include messaging charges, phone, printing, plus the incentives for a visit and referrals. The overhead expenses were estimated at 20% of the total. The project intends to reach at least 1000 LGBTQ+ for a start.

In this case, the budget for secondary prevention is as follows:

	<b>Item</b>	<b>cost</b>	<b>Subtotal</b>	<b>Total</b>
<b>Personnel</b>				
Training (one day)	3 days	\$200 x 3	\$600	\$600
Remuneration (all professionals in the project)	24 months	\$60,000	\$60,000	\$60,000
Fridge benefits	24 months	23.2% x \$60,000	\$13,920	\$13,920
Volunteer time (professionals volunteering to implement the project)	24 months	Hours x professionals fee = 200 x \$65	\$13,000	\$13,000
<b>Non-personnel</b>				
Materials (messaging charges, phone and printing plus the incentives for a visit and referrals)	24 months		\$10,000	\$10,000
Travel		-	-	-
Rental of facilities (use local hospitals)	24 months	-	-	-
Viral load testing/HIV testing	24 months	\$8.83 x 1000 (target population)	\$8,830	\$8,830
Evaluation		\$180 (standard fee)	\$180	\$180
<b>Totals</b>				106,530
Overhead (to cater for miscellaneous not covered in the budget)	24 months	20% of the total budget 20% x 106530	\$21,306	\$21,306
Administrative fee			\$100	\$100
			<b>Grand Total</b>	<b>\$127,936</b>
Sought from other sources (from the hospital)				<b>(\$27,936)</b>
<b>Total Grant Request</b>				<b>\$100,000</b>

### Method of Evaluation

The evaluation looks at various aspects of the project, such as strengths, weaknesses, change, cost-effectiveness, project impact, and continuing benefits. The project's strength lies in its use of locally available resources, including the hospitals and schools. From this perspective,



the project will benefit the local community. The weakness arises from the use of some professionals volunteering to serve the youth. The professionals will come from various areas, so the project does not guarantee benefits for the hospital workforce. However, the project is expected to impact the behavior of the LGBTQ+ youth population in middle and high schools. The population is projected to engage in HIV screening and responsible sex behaviors. Consequently, the rate of new infections will decrease significantly in this population. The LGBTQ+ youth population will continue accessing sexual healthcare and receive treatment for other sexually transmitted diseases.

At the end of the project, the team will measure the number of the LGBTQ+ student population in middle and high schools in contact with the screening services. The team will measure numbers against the baseline of 1000 youths targeted during the two years of project implementation. The project team will collect information about gender, age, sexual orientation, and level of education. The team will collect data during enrollment, which will be collected electronically for confidentiality purposes. The project team will use software with security measures to ensure only the authorized persons access the participants' data.

The project team will analyze data to evaluate the association between outcomes and the project's cost. The findings will establish if the project was worth the investment. The project team will generate reports about the number of the LGBTQ+ youth population who received screening and their HIV status. Also, the project will create reports about treatment and responses like behavior change and continued access to healthcare services. The information will help the financiers identify value for their money. On the other hand, the project team will use the data to identify healthcare delivery areas needing improvement to ensure the LGBTQ+ continue accessing HIV screening and treatment from local healthcare facilities. The larger

community will benefit from information about the effectiveness of HIV screening services and access to primary healthcare services.

### **Sustainability Plan**

The sustainability plan explains how the project will continue to benefit the LGBTQ+ population. The project leader will seek collaboration with local healthcare facilities to reach the population in the community. The healthcare organizations will provide culturally competent care to the vulnerable population. The healthcare organizations will utilize the findings from the project to make the screening services appealing to the LGBTQ+ youth population. The project team will push for the incorporation of the project in hospitals with free HIV services. The approach will guarantee access to appropriate HIV screening services by the LGBTQ+ groups. Also, the collaboration will ensure access to healthcare services for youths from different sexual orientations.

Besides, the hospital will adopt the project as part of expanding access to healthcare by the vulnerable group. The healthcare organization's mission is to decrease health disparities and inequities in accessing secondary preventive services. The healthcare entity will finance the project using part of the money received from the federal government. Moreover, the project leader will continue to seek funding from other not-for-profit organizations interested in HIV programs.

### **Conclusion**

The mini-grant project will assist in generating information about LGBTQ+ groups, access to HIV screening, and response to secondary prevention. The project will increase HIV testing and treatment in youths. Also, it will achieve a lasting impact on behavior change as the youth develop health consciousness and assume responsibility for their lives. The project will

impact healthcare delivery by health organizations by ensuring it has the mechanism to attract care usage by the vulnerable group. The mini-grant project lays the foundation for similar projects in the future.

## References

- Armoon, B., Fleury, M. J., Bayat, A. H., Fakhri, Y., Higgs, P., Moghaddam, L. F., & Gonabadi Nezhad, L. (2022). HIV related stigma associated with social support, alcohol use disorders, depression, anxiety, and suicidal ideation among people living with HIV: a systematic review and meta-analysis. *International Journal of Mental Health Systems, 16*(1), 1-17. <https://doi.org/10.1186/s13033-022-00527-w>
- Ayala, G., & Spieldenner, A. (2021). HIV Is a Story First Written on the Bodies of Gay and Bisexual Men. *American Journal of Public Health, 111*(7), 1240-1242. <https://ajph.aphapublications.org/doi/10.2105/AJPH.2021.306348>
- Blood, G. A. C. (2016). Human immunodeficiency virus (HIV). *Transfusion Medicine and Hemotherapy, 43*(3), 203-222. <https://doi.org/10.1159/000445852>
- Cahill, S., & Valadéz, R. (2022). *Community-based approaches to HIV prevention that address Antigay Stigma*. American Psychological Association. <https://www.apa.org/pi/aids/resources/exchange/2012/04/anti-gay-hiv>
- Carroll-Scott, A., Henson, R. M., Kolker, J., & Purtle, J. (2017). The role of nonprofit hospitals in identifying and addressing health inequities in cities. *Health Affairs, 36*(6), 1102-1109. <https://doi.org/10.1377/hlthaff.2017.0033>
- Centers for Disease Control and Prevention (CDC). (2021). *HIV and gay and bisexual men*. Centers for Disease Control and Prevention. [https://www.cdc.gov/vitalsigns/hivgaybimen/index.html#:~:text=HIV%20and%20Gay%20and%20Bisexual%20Men%20%7C%20VitalSigns%20%7C%20CDC&text=Gay%20and%20bisexual%20men\\*%20accounted,new%20HIV%20infections%20in%202019.&text=Only%2027%25%20of%20Black%2FAfrican,PrEP\)%20used%20it%20in%202017.](https://www.cdc.gov/vitalsigns/hivgaybimen/index.html#:~:text=HIV%20and%20Gay%20and%20Bisexual%20Men%20%7C%20VitalSigns%20%7C%20CDC&text=Gay%20and%20bisexual%20men*%20accounted,new%20HIV%20infections%20in%202019.&text=Only%2027%25%20of%20Black%2FAfrican,PrEP)%20used%20it%20in%202017.)

- Centers for Disease Control and Prevention (CDC). (2022). *Basic statistics*. Centers for Disease Control and Prevention. <https://www.cdc.gov/hiv/basics/statistics.html>
- Centers for Disease Control and Prevention (CDC). (2022a). *Ways HIV can be transmitted*. Centers for Disease Control and Prevention. Retrieved from <https://www.cdc.gov/hiv/basics/hiv-transmission/ways-people-get-hiv.html>
- Chen, Y. T., Duncan, D. T., Issema, R., Goedel, W. C., Callander, D., Bernard-Herman, B., Hanson, H., Eavau, R., Schneider, J. & Hotton, A. (2020). Social-environmental resilience, PrEP uptake, and viral suppression among young black men who have sex with men and young black transgender women: the neighborhoods and networks (N2) study in Chicago. *Journal of Urban Health*, 97(5), 728-738.  
<https://doi.org/10.1007/s11524-020-00425-x>
- Chou, R., Evans, C., Hoverman, A., Sun, C., Dana, T., Bougatsos, C., Grusing, S., & Korthuis, P. T. (2019). Preexposure prophylaxis for the prevention of HIV infection: evidence report and systematic review for the US Preventive Services Task Force. *Jama*, 321(22), 2214-2230. <https://doi.org/10.1001/jama.2019.2591>
- Cohen, M. S., Council, O. D., & Chen, J. S. (2019). Sexually transmitted infections and HIV in the era of antiretroviral treatment and prevention: the biologic basis for epidemiologic synergy. *Journal of the International AIDS Society*, 22, e25355.  
<https://doi.org/10.1002/jia2.25355>
- D'Souza, G., Golub, E. T., & Gange, S. J. (2019). The changing science of HIV epidemiology in the United States. *American Journal of Epidemiology*, 188(12), 2061-2068.  
<https://doi.org/10.1093/aje/kwz211>

- Fernandez, M. I., Harper, G. W., Hightow-Weidman, L. B., Kapogiannis, B. G., Mayer, K. H., Parsons, J. T., Rotheram-Borus, M. J., Seña, A. C., & Sullivan, P. S. (2021). Research priorities to end the adolescent HIV epidemic in the United States. *JMIR Research Protocols*, *10*(1), e22279. <https://doi.org/10.2196/22279>
- Gleason, N., Serrano, P. A., Muñoz, A., French, A., & Hosek, S. (2021). Limited Interaction Targeted Epidemiology of HIV in Sexual and Gender Minority American Adolescents and Adults: Feasibility of the Keeping it LITE Study. *JMIR Formative Research*, *5*(11), e30761. <https://doi.org/10.2196/30761>
- Hafeez, H., Zeshan, M., Tahir, M. A., Jahan, N., & Naveed, S. (2017). Health care disparities among lesbian, gay, bisexual, and transgender youth: a literature review. *Cureus*, *9*(4). <https://doi.org/10.7759/cureus.1184>
- HealthyPeople2030. (n.d.). *Health Care Access and Quality*. Health Care Access and Quality Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-care-access-and-quality>
- Kisling, L. A., & Das, J. M. (2021). Prevention strategies. In *StatPearls [Internet]*. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK537222/>
- Miller, R. L., Boyer, C. B., Chiaramonte, D., Lindeman, P., Chutuape, K., Cooper-Walker, B., Kapogiannis, B. G., Wilson, C. M., & Fortenberry, J. D. (2017). Evaluating testing strategies for identifying youths with HIV infection and linking youths to biomedical and other prevention services. *JAMA Pediatrics*, *171*(6), 532-537. <https://doi.org/10.1089/lgbt.2017.0098>
- Miller, R. L., Rutledge, J., & Ayala, G. (2021). Breaking down barriers to HIV care for gay and bisexual men and transgender women: The advocacy and other community tactics (ACT)

project. *AIDS and Behavior*, 25(8), 2551-2567. <https://doi.org/10.1007/s10461-021-03216-w>

National LGBTQIA+ Health Education Center. (2021). *Ten Strategies for Creating Inclusive Health Care Environments for LGBTQIA+ People*.

<https://www.lgbtqiahealtheducation.org/>. <https://www.lgbtqiahealtheducation.org/wp-content/uploads/2021/05/Ten-Strategies-for-Creating-Inclusive-Health-Care-Environments-for-LGBTQIA-People-Brief.pdf>

Pollack Porter, K. M., Rutkow, L., & McGinty, E. E. (2018). The importance of policy change for addressing public health problems. *Public Health Reports*, 133(1), 9S-14S.

<https://doi.org/10.1177/0033354918788880>

Schlanger, Z. (2017). *A teen health survey crucial to US public policy is finally asking about sexual orientation*. Quartz. <https://qz.com/1014142/a-teen-health-survey-crucial-to-us-public-policy-is-finally-asking-kids-about-their-sexual-orientation/>

Showa, S. P., Nyabadza, F., & Hove-Musekwa, S. D. (2019). On the efficiency of HIV transmission: Insights through discrete time HIV models. *Plos One*, 14(9), e0222574.

<https://doi.org/10.1371/journal.pone.0222574>

Skaathun, B., Pho, M. T., Pollack, H. A., Friedman, S. R., McNulty, M. C., Friedman, E. E., Schmitt, J., Pitrak, D., & Schneider, J. A. (2020). Comparison of effectiveness and cost for different HIV screening strategies implemented at large urban medical centre in the United States. *Journal of the International AIDS Society*, 23(10), e25554.

<https://doi.org/10.1002/jia2.25554>

The Human Rights Campaign. (2017). *HIV and the LGBTQ community*. Human Rights Campaign. <https://www.hrc.org/resources/hrc-issue-brief-hiv-aids-and-the-lgbt-community>

Tsui, B. C., Deng, A., & Pan, S. (2020). Coronavirus Disease 2019: Epidemiological factors during aerosol-generating medical procedures. *Anesthesia and Analgesia*. <https://doi.org/10.1213/ANE.0000000000005063>

U.S. Department of Health & Human Services. (2022). *U.S. statistics*. HIV.gov. <https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics>

Vidya Vijayan, K. K., Karthigeyan, K. P., Tripathi, S. P., & Hanna, L. E. (2017). Pathophysiology of CD4+ T-cell depletion in HIV-1 and HIV-2 infections. *Frontiers in Immunology*, 8, 580. <https://doi.org/10.3389/fimmu.2017.00580>