Global Health Case Competition,

Prince Mahidol Award Conference 2025

HIV/AIDS in Haiti

The case will surround the theme of **Reverse Innovation**. Reverse innovation refers to the process where innovations originally created for low-income, developing markets prove to be successful when adapted and adopted in high-income, developed markets. You can explore more about the topic through the provided link: https://rdcu.be/dOpwY.

Disclaimer: All characters and the non-profit organization described within the case are fictional, but the background Information provided in the case report reflects real-life data and events ongoing in Haiti. Teams are responsible for justifying the accuracy and validity of all data and calculations that they use in their presentations.

Case Scenario

Introduction

Haiti has one of the highest HIV prevalence rates in the Caribbean region. The country faces numerous challenges that exacerbate the HIV epidemic, with an estimated 150,000 people living with HIV. The prevalence rate among adults aged 15-49 is approximately 1.6% in 2023. The country's ongoing humanitarian efforts have stalled due to disrupted HIV treatment and prevention services, including political instability, weak governance and coordination, along with geographic and natural disasters. This epidemic places a heavy burden on Haiti's fragile economy, affecting productivity and increasing healthcare costs. Additionally, the country faces difficulty in retaining qualified health professionals, and nationwide socio-political unrest continues to disrupt efforts. These factors collectively hinder the fight against HIV, making it challenging to achieve sustained progress.

Welcome to the Global Health Case Competition 2025, Side Meeting of Prince Mahidol Award Conferences 2025. This year, we present you with a compelling and intricate case centered around global health and reverse innovation in underdeveloped countries, using the HIV epidemic in Haiti as the proposed case. Your task is to address the multifaceted challenges regarding HIV epidemics in the country and use reverse innovation to present comprehensive responses while also covering additional considerations tailored to the challenges presented in the case study.

Scene: A sun-bleached adobe clinic nestled amongst olive groves in Haiti.

Characters:

- Dr. PierreDr.Pierre: A young doctor who still faces challenges, including issues related to doctor burnout and social problems within the healthcare system
- Nadinene: A sex worker who is exposed to HIV and other diseases due to her lack of protection during sexual encounters.

• Claireclaire: A social worker,Addressing healthcare issues is tough, especially in resource-constrained countries. While it may seem hopeless, seeking solutions and supporting those in need remains important.

Dr. Pierre: Good afternoon, Nadine. How have you been feeling lately?

Nadine: Not so good, Dr. Pierre. I've been really struggling and haven't been able to come in for my follow-ups.

Dr. Pierre: I'm sorry to hear that, Nadine. It's crucial to stay engaged in your care, especially with your condition. Can you share what's been preventing you from coming in?

Nadine: I believe there’s a lot of things to tackle. To be honest, I feel ashamed of myself and being looked down upon is kind of rough. Also, dealing with inequality and depression makes everything harder. Sometimes, using drugs feels like the only way to cope. And honestly, knowing that the medicine isn't always available makes it feel pointless.

Claire: Hi Nadine, I'm Claire, a social worker here. It's really brave of you to share that. Can you tell us more about what's been making it hard to follow up with your care?

Nadine: Well, the clinics are quite far from my home, and I can't always afford the transportation. And when I do get there, sometimes the drugs I need aren't even available. It feels like the system is set up to discriminate against people like me. Getting out of bed for me is already hard enough and now I have to deal with all this stuff?

Dr. Pierre: I understand, Nadine. The healthcare system in Haiti has many challenges, but we're here to support you. It's important to address both your physical and mental health. What can we do to make it easier for you to stay engaged in your care?

Nadine: I think having more accessible clinics and support for transportation would help. Also, having someone to talk to about my depression and drug use would make a big difference. And knowing that the medicine will be there when I need it.

Claire: We can definitely work on connecting you with counseling services and support groups. It's important to address all aspects of your well-being. You're not alone in this, Nadine.

Nadine: That sounds helpful. I just want to feel like I'm not alone in this.

Dr. Pierre: You're not alone, Nadine. We're here to help you every step of the way. Let's take it one step at a time. How about we schedule a follow-up appointment and connect you with some support services?

Claire: And we'll also look into ways to make the healthcare system more accessible for you. Your voice matters, Nadine, and we're here to support you.

Nadine: Thank you, both. I think I can try that.

Assigned role

Your team’s role will be the executive team of the Haitian Network of People Living with HIV (HHIV), a non-profit organization deeply rooted in the communities of Haiti with a mission to make an impact on HIB care and quality of

life of Haitians living with HIV. Within a two-year timeframe and a limited budget of $5,000,000, you are to solve challenges given by us.

Core challenges

The challenge proposed for this global health case is to develop innovation(s) which tackle the HIV/AIDS problem in Haiti focusing on sustaining undetectable viral load and adherence to antiretroviral therapy (ART) and prevention of HIV transmission.

Additional Consideration

Cultural consideration:

In Haiti, gender inequality is exacerbated by the lack of education among the population, which contributes to various health challenges. There are frequent interruptions in the treatment of people infected with HIV, partly due to the limited number of health professionals in the country. This situation is particularly dire for sex workers, who are at high risk of contracting different strains of HIV. Additionally, the stigma surrounding HIV/AIDS remains a significant barrier to effective prevention and treatment. Discrimination can discourage individuals from seeking testing or treatment, further impacting their overall well-being.

Other aliment considerations:

Tuberculosis (TB), for example, remains a major cause of mortality among people living with HIV (PLHIV). In fact, individuals with HIV are 18 times more likely to develop active tuberculosis compared to those without the virus, making TB a significant health concern for this vulnerable population.

Economic and Financial considerations:

Haiti is a developing country that faces significant challenges related to poverty and limited access to healthcare. The healthcare system struggles with issues such as delayed diagnosis, lack of HIV testing, and the unavailability of quality condoms. These shortcomings contribute to situations where people, especially women, are forced into transactional sex, often without the ability to negotiate for safe sex practices. The low socioeconomic status of many Haitians exacerbates these issues, and the insufficiency of medical equipment further hinders effective healthcare delivery. However, Haiti has received substantial support from international organizations, including the Global Fund and PEPFAR (the U.S. President's Emergency Plan for AIDS Relief), to help address these challenges.

Project structure

Narrative: Starting with defining the prompt, present your solution, and show the relation between prompt and solution.

Time frame - 2 years for finishing implementation and distribution.

Budget - $5,000,000

Feasibility - The plausibility for this innovation to be implemented.

Impact measurement - Describe the practical criteria or instrument which you will use to evaluate your solution.

Sustainability: Your solution should be long-term, practical and sustainable in the long run.

Alignment with this year's theme; reverse innovation. You can explore more about the topic through the provided link: https://rdcu.be/dOpwY.

Notes: The details may be subject to change as appropriate. Please be sure to review the rubrics score.

Background

Country Profile

Haiti, with a population of 11.86 million, is the second-largest Caribbean island, sharing its territory with the Dominican Republic. The urban population makes up 58.82% of the total, with significant geographical and social disparities affecting healthcare access.

Capital: Port-au-Prince

Population: (as in 2024) 11.86 million

Official Language: French, Haitian Creole

Religions: Roman Catholic (55%), Protestant (29%), Vodou (2.1%)

Table 1: Key Country Figures

Population	
Urban population	58.82 %
Life expectancy	65.25 years
Population density	427.64 people per square kilometer
Birth rate	22.329 births (per 1000 people)
Infant mortality rate	46.869 deaths per 1000 live births
Fertility rate	2.710 births per woman

Economy	
GDP growth rate	-1.68%
GDP per capita	US $1,748
Labor force	
Unemployment rate	(as in 2022) 14.78%
Education	
Literacy rate	(as in 2016) 83% (of people ages 15-24)

- Natural Disasters:

  Haiti's vulnerability to natural disasters like earthquakes and hurricanes further exacerbates the challenges in healthcare delivery.

Economic and Social Context

- Economic Indicators:

  Haiti is one of the poorest countries in the Western Hemisphere, with a Gross National Income (GNI) of $780 per capita and a GDP of $784.08 per capita (2019).

- Health Financing:

  Domestic health financing remains low, with significant reliance on international funding. The limited budget restricts the ability to address healthcare infrastructure needs.

Current HIV Landscape

Table 2 HIV and AIDS estimates in Haiti

HIV and AIDS Estimates	
Adults aged 15 and over living with HIV	130,000 [120,000 - 160,000]
Women aged 15 and over living with HIV	79,000 [68,000 - 92,000]
Men aged 15 and over living with HIV	55,000 [48,000 - 65,000]
Children aged 0 to 14 living with HIV	6,400 [5,200 - 7,900]
Adult aged 15 to 49 HIV prevalence rate	1.6 [1.5 - 1.9]
Women aged 15 to 49 HIV prevalence rate	2.0 [1.8 - 2.3]
Men aged 15 to 49 HIV prevalence rate	1.3 [1.0 - 1.4]
HIV prevalence among young women	0.8 [0.4 - 1.1]
HIV prevalence among young men	0.3 [0.2 - 0.5]
Antiretroviral therapy (ART)	
Coverage of adults and children receiving ART (%)	84 [72 - 97]

Haiti faces significant hurdles in controlling the HIV epidemic due to various factors:

- Frequent Interruptions in Treatment:

Caused by weak governance, socio-political unrest, and natural disasters like the 2021 earthquake, which disrupt access to care and medication.

- Geographical and Financial Barriers:

  Difficulties in accessing health services, especially in rural areas, further impede progress.

- Human Resources:

  Retaining qualified health professionals is challenging, exacerbating the situation.

The current situation regarding HIV conditions in Haiti:

- HIV Prevalence:

  Haiti has the highest HIV burden in the Caribbean, with an estimated 154,713 people living with HIV. The prevalence rate among adults (15-49 years) is estimated at 1.6%, with higher rates in major cities and among key populations (e.g., men who have sex with men, sex workers).

- Progress:

  Despite challenges, significant progress has been made, with a 21% reduction in new infections and a 75% decrease in AIDS-related deaths between 2010 and 2022.

Background Information on Related Organizations

USAID Overview:

The United States Agency for International Development (USAID), founded by President John F. Kennedy in 1961, leads U.S. efforts in international development and humanitarian support. USAID focuses on saving lives, reducing poverty, strengthening governance, and promoting self-reliance.

- USAID Strategy in Haiti:

  USAID partners with local and international NGOs to provide high-quality, equitable, and sustainable HIV services, while encouraging the Government of Haiti to take greater ownership of its health systems. These initiatives aim to enhance stability and resilience in Haiti through the resources provision, technical support, and stakeholder collaborations.

- Highlighted HIV-Related Key Campaigns:
  - IMPACT Youth:

    Delivers education and economic empowerment to youth living with HIV, along with comprehensive case management for their families.
  - DREAMS Partnership:

    Supports adolescent girls and young women in developing life skills to avoid risky behaviors such as transactional sex, multiple partners, and exposure to violence.
  - SWITCH U=U:

    Promotes HIV treatment literacy and adherence, reduces stigma and discrimination through social messaging, supports undetectable viral loads to prevent transmission, and contributes to COVID-19 vaccination efforts.
  - Epidemic Control Among Key and Priority Populations (ECP2) Activity:

    Fosters comprehensive HIV services to LGBTQI communities, people in prisons, and sex worker clients. The activity also focuses on capacity building for key population-led organizations and advocates for gender equity and inclusion, while engaging in COVID-19 vaccination initiatives.

- Results of The Campaigns:

- Between October 2021 and March 2022, USAID facilitated HIV services including prevention, testing, and counseling to over 71,000 people. All 2,352 individuals diagnosed with HIV were treated with antiretrovirals.
- From October to December 2021, USAID-supported sites in Haiti attained an 87 percent viral load suppression rate. Over 1,000 individuals from key populations received HIV Pre-Exposure Prophylaxis (PrEP), preventing new HIV infections.
- More than 1,600 mobile individuals, migrants, and underserved men living with HIV accessed essential care.
- Over 87% of HIV patients nationwide maintained viral suppression, contributing to reduced transmission.
- Nearly 13,000 adolescent girls and young women completed life skill courses through IMPACT Youth, enhancing their ability to manage or prevent HIV.

UNDP Overview:

The United Nations Development Programme (UNDP) operates in about 170 countries and territories, emphasizing the eradication of poverty, the reduction of inequalities and exclusion, and the building of resilience to sustain progress. As the UN's development agency, UNDP plays a critical role in helping countries achieve the Sustainable Development Goal (SDGs).

- UNDP campaigns in Haiti:
  - Reconstruction of Health Care Facilities in the Great South
  - Insurance and Risk Finance Facility (Affordable Climate Insurance)
  - Post-Disaster Needs Assessment (PDNA)
  - Strengthening the Justice System

- Reinforcing Haiti's Capacities and Resilience
  - Engaging the Civil Society
  - Educating Future Generations
  - Building National Capacity

Key Programs and Policies

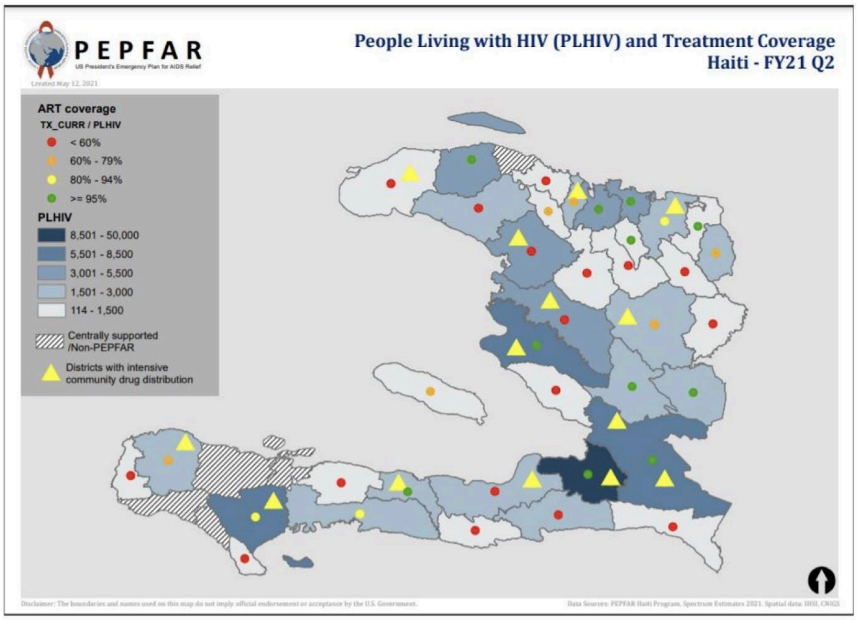
- PEPFAR Initiatives (COP21):

  Programs are being optimized for case identification, antiretroviral therapy (ART) quality, and retention in treatment. The focus is also on orphans, vulnerable children, and prevention of mother-to-child transmission (PMTCT).

- Community Leadership:

  UNAIDS emphasizes strengthening community leadership as a critical component in ending AIDS as a public health threat by 2030.

Figure 2.4.2. Alignment of PEPFAR investments geographically to disease burden



- Sustainability:

The SID exercise is conducted biennially to assess the sustainability landscape and inform HIV investment decisions.

Comorbidities

- Tuberculosis (TB):

  Haiti has the highest TB incidence in the region. People living with HIV are 18 times more likely to develop TB, making it a major cause of mortality among this population. TB co-infection complicates HIV treatment and requires a more complex regimen, which can disrupt viral suppression efforts.

- Typhoid Fever:

  Haiti reports approximately 1,200 suspected cases of typhoid fever weekly. For people living with HIV, co-infection with typhoid can pose serious risks, as their weakened immune systems are less able to combat the infection. Disruption in antiretroviral therapy (ART) due to illness can lead to poor viral suppression and increased morbidity.

- COVID-19:

  The COVID-19 pandemic has strained healthcare systems in Haiti, potentially impacting HIV services. People living with HIV, especially those with a low CD4 count, are at greater risk for severe COVID-19 outcomes. Interruptions in care due to the pandemic may hinder ART adherence, leading to challenges in maintaining viral suppression.

- Sexually Transmitted Infections (STIs):

  STIs, including syphilis, gonorrhea, and chlamydia, are prevalent in Haiti and can increase the risk of acquiring HIV. For those already living with HIV, untreated STIs can exacerbate HIV progression and complicate treatment, making viral suppression more difficult to achieve.

- Malaria:

Malaria is endemic in certain regions of Haiti, particularly after the rainy seasons. For people living with HIV, co-infection with malaria can weaken the immune system further, leading to severe illness and complications in managing HIV. Ensuring consistent ART during malaria treatment is crucial to maintain viral suppression.

Socioeconomic Factors

- Impact of Prostitution on HIV Transmission:

  Prostitution, driven by economic necessity and gender inequality, significantly contributes to the HIV epidemic. Sex workers, often subject to violence and unable to negotiate safe sex practices, are at high risk of HIV infection.

- Poverty as a Driver:

  Limited access to healthcare, low education levels, economic vulnerability, and malnutrition all contribute to the high HIV rates in Haiti. The poor are more likely to engage in high-risk behaviors and face delayed diagnosis and treatment.

- Gender Dynamics and HIV Misconceptions:

  Misconceptions about HIV persist, with a notable difference in how men and women perceive and understand the disease. Misinformation and stigma continue to be significant barriers to effective prevention and treatment.

International Support and Future Goals

- Global Support:

  International aid continues to play a crucial role in stabilizing the HIV prevalence in Haiti. Future goals focus on enhancing community engagement, improving sustainability, and reducing reliance on foreign aid.

Appendices

1. CDC. (2024). *Haiti | CDC Yellow Book 2024*. Wwwnc.cdc.gov. https://wwwnc.cdc.gov/travel/yellowbook/2024/itineraries/haiti
2. *Community-Led Monitoring | International AIDS Society (IAS)*. (n.d.). Www.iasociety.org. https://www.iasociety.org/ias-programme/community-led-monitoring
3. *Country profile Haiti*. (n.d.). https://www.worldvision.com.au/docs/default-source/school-resources/haiti-country-profile.pdf?sfvrsn=dafe3268_0
4. Devieux, J. G., Deschamps, M.-M., Malow, R. M., Michele Jean-Gilles, Saint-Jean, G., Saint-Jean, G., Marcelin, A., & Jean Willam Pape. (2009). Knowledge, Attitudes, and Behaviors Among a Sample of HIV-Positive and HIV-Negative Females Visiting an Urban VCT Center in Haiti. *Journal of Health Care for the Poor and Underserved*, *20*(2), 554–568. https://doi.org/10.1353/hpu.0.0141
5. Fawzi, M. C. S., Lambert, W., Boehm, F., Finkelstein, J. L., Singler, J. M., Leandre, F., Nevil, P., Bertrand, D., Claude, M. S., Bertrand, J., Louissaint, M., Jeannis, L., Farmer, P. E., Yang, A. T., & Mukherjee, J. S. (2010). Economic Risk Factors for HIV Infection Among Women in Rural Haiti: Implications for HIV Prevention Policies and Programs in Resource-Poor Settings. *Journal of Women's Health*, *19*(5), 885–892. https://doi.org/10.1089/jwh.2008.1334
6. *Haiti | United Nations Development Programme*. (n.d.). Www.undp.org. https://www.undp.org/tag/haiti
7. *Haiti Refugee Statistics 2016-2024*. (2016). Macrotrends.net. https://www.macrotrends.net/global-metrics/countries/HTI/haiti/refugee-statistics
8. Magee, E. M., Small, M., Frederic, R., Joseph, G., & Kershaw, T. (2006). Determinants of HIV/AIDS Risk Behaviors in Expectant Fathers in Haiti. *Journal of Urban Health*, *83*(4), 625–636. https://doi.org/10.1007/s11524-006-9063-4

9. Policar, S., Sharp, A., Joanne Isidor Hyppolite, Gerald Marie Alfred, Steide, E., Lucien, L., Ledan, N., & Kavanagh, M. (2023). Drivers of HIV treatment interruption: Early findings from community-led monitoring program in Haiti. *PloS One*, *18*(12), e0295023–e0295023. https://doi.org/10.1371/journal.pone.0295023
10. *Prostitution and violence in Haiti | Le Floridien.com*. (2020, December 1). https://www.lefloridien.com/prostitution-and-violence-in-haiti/
11. *Strengthening Haiti's HIV response through community-led monitoring*. (n.d.). https://www.unaids.org/en/resources/presscentre/featurestories/2021/december/20211203_strengthening-haiti-HIV-response-through-community-led-monitoring
12. UNAIDS. (2016). *Haiti*. Unaids.org. https://www.unaids.org/en/regionscountries/countries/haiti
13. *World Bank Open Data*. (2024). World Bank Open Data. https://data.worldbank.org/indicator/SE.ADT.1524.LT.ZS?locations=HT&name_desc=false
14. Worldometer. (2023). *Haiti Population (2019) - Worldometers*. Worldometers.info. https://www.worldometers.info/world-population/haiti-population/