

Combatting the Prevalence of HIV/AIDS in The Caribbean

HIV Origin and Structure

Human immunodeficiency virus (HIV) is responsible for the acquired immunodeficiency syndrome (AIDS). It is widely believed that HIV-1 and HIV-2 are the results of multiple cross-species transmissions of the simian immunodeficiency virus, which usually infects African primates (Sharp & Hahn, 2011). The transmission event that resulted in HIV took place amongst chimpanzees in Cameroon and gave rise to HIV-1 group M (Sharp & Hahn, 2011).

Both HIV-1 and HIV-2 are a part of the family of Retroviruses and in the genus of Lentiviruses. There are presently many different strains of HIV that are separated as: M for major, N for new and O for outlier groups. The virus itself is approximately 100 nm in diameter with a lipid envelope where different glycoproteins are embedded. The center of the virus contains other viral proteins and its nucleic acid.

The HIV genome consists of two identical single stranded RNA molecules. Both HIV-1 and HIV-2 can result in AIDS, however, the mechanistic differences between the two still are not completely understood. Nonetheless, HIV-2 is characterized by lower transmissibility and a reduced likelihood of progressing into AIDS (Nyamweya, et. al. 2013). HIV-2 occurs at a higher CD4 count and is mainly confined to West Africa while HIV-1 is found worldwide. The body's immune response to HIV-2 is more protective against progression into AIDS, which provides hope that if these immune responses can be replicated in HIV-1 patients it can increase their survival rates (Nyamweya, et. al. 2013).

HIV Replication Cycle

The replication cycle of lentiviruses like HIV-1 resembles the cycle of retroviruses, however, HIVs target receptors and co-receptors are different from other retroviruses (Freed, 2001). The virus enters the body through the mucous membranes, injured skin, and by parenteral inoculation. The HIV-1 genome encodes for the major proteins. From here, the HIV RNA, reverse transcriptase, integrase and

other viral proteins enter the cell. The reverse transcriptase converts the viral RNA into DNA (reverse transcription) and the integrase allows for the new viral DNA to be intertwined with the DNA of the host cell (integration). This creates new viral RNA which is then translocated into the cytoplasm of the cell via a trans-activating protein known as Rev (Freed, 2001). The new viral RNA makes more viral proteins using the cell's resources and produces immature HIV forms. The virus develops through the help of protease, forming mature virions (Freed, 2001).

HIV Transmission

HIV can be transmitted in five ways: sexual contact with an infected partner, contact with infected blood or blood products, sharing blood contaminated needles and syringes, transmission from mother to unborn child through the placenta, and pre-mastication - pre-chewing food for infants (Krasner, 2010). Despite the fact that HIV/AIDS is not a new disease, there is still no cure or a preventative vaccine. Infected persons are given an AIDS Cocktail or HAART (highly active antiretroviral therapy) which is a combination of drugs that usually includes two reverse transcriptase inhibitors and one protease inhibitor but can also incorporate entry and fusion inhibitors (Krasner, 2010). Although there are several biological ways to eradicate this disease, HIV/AIDS can be described as a social disease. Due to the stigma that has followed the disease since its discovery and the way we view sex in most societies, eradicating this disease will take tremendous work both biologically and socially.

The History of HIV in The Caribbean

The Caribbean, consisting of the Caribbean Sea, the North Atlantic Ocean and the island nations that reside within them are known for attracting large numbers of tourist every year. However, a closer look at these countries may reveal other statistics that describe their grapple with sexual transmitted diseases. Using geographic sequencing, scientist have developed a timeline of the origin of the HIV-1

group M subtype B, the first strand of HIV discovered and the predominant variant of the virus outside of sub-Saharan Africa (Gilbert, Rambaut, et.al, 2007). The results suggest that the subtype B likely moved from Africa to Haiti around 1966 (Gilbert, Rambaut, et.al, 2007). This virus is seen as one of the most genetically diverse subtypes and contributes to the fact that Haiti has the oldest HIV/AIDS epidemic outside of sub-Saharan Africa. Epidemiologists believe that the virus then dispersed across the Americas through a single migration event out of Haiti around 1969 (Gilbert, Rambaut, et.al, 2007).

Today's Concerns

Currently, HIV/AIDS exists throughout The Caribbean. Managing the disease has become difficult as the region consists of many different nations that are similar in just as many ways as they are different. This paper seeks to highlight the HIV/AIDS epidemic within The Caribbean. To begin, it is important to note that economic factors, specifically poverty levels, are often associated with the prevalence of HIV/AIDS in certain countries. Evidence shows, however, that there are factors aside from a country's GDP that relate to their HIV/AIDS situation. For instance, The Bahamas has the highest GDP of all Caribbean countries yet has the highest rates of HIV infections. This shows that although GDP has some effect on the prevention of HIV it is not the only determining factor. If this were so, Haiti, as the Caribbean country with the lowest GDP, would have the highest rates of HIV. That being said, the intervention and funding Haiti receives from other countries has lowered its HIV rates (AIDS Healthcare Foundation, 2017). Despite this, it can be argued that sociocultural and ecological issues are more pertinent for examining the current situation of HIV/AIDS in the Caribbean. English-speaking Caribbean nations have shared sociocultural practices since they were colonized. More specifically, they share legal and religious taboos that result in stigma, shame and denial. These thoughts often inhibit safe sex practices. Additionally, they all rely heavily on the tourism industry and are known around the world as

key tourist destinations which provides another useful perspective for explaining why The Caribbean struggles with HIV to such an extent.

Social and Cultural Factors

One of the major factors that plays a role in the high rates of HIV/AIDS in The Caribbean is the prevalence of hypermasculinity and how this affects sexual relationships. On one hand, women in Caribbean culture tend to have one single partner and as an act of faithfulness and trust, participate in unprotected sex with their partner. This increases the risk of HIV infection for women. On the other hand, men are expected to have several partners, be assertive and macho in their relationships. Men may also use economic resources resulting from gender inequality in The Caribbean to obtain sexual interactions (Anderson P., 2012). In this way, women are usually involved in unequal relationships where they may resort to having unprotected sex in order to survive in a struggling economy where unemployment rates may be as high as 40.6% in the example of Haiti (The World Factbook: Haiti, 2018). Physical abuse and violence of women and children have also been seen to result in higher rates of unprotected sex and HIV infections (Anderson P., 2012).

Homophobia is very prevalent in Caribbean culture. Data collected by the Jamaican Forum for Lesbians, All-Sexuals and Gays in 2012 recorded that 88% of respondents believed that male homosexuality was immoral and nearly 84% considered female homosexuality to be immoral. The International Lesbian, Gay, Trans and Intersex Association (ILGA) 2011 report stated that there was 'State Sponsored Homophobia' in 11 of 12 Commonwealth Caribbean countries due to the standing laws that still condemned homosexual intercourse and relations. These laws, which in some cases have not been changed since the 1800s, are deeply rooted in the Christian belief system that has been an enormous part of Caribbean culture since its introduction by the Europeans in the 16th Century. As of 2011, The Bahamas was the only country out of the 12 Commonwealth Caribbean countries that repealed its

‘buggery laws’. The term buggery, which is still used in the constitution of many of these nations is a testament in itself of the long history of homophobia in The Caribbean as the word was commonly used interchangeably with ‘sodomy.’ Hate and violence towards homosexuals within The Caribbean has also been perpetuated in music and film. Essentially, the homophobia at the legal level carries down into the structural and cultural level and creates a barrier for accessing and delivering HIV services (Avert, 2018). Therefore, homosexuals are discriminated against and avoid seeking care that leads to new infections as well as death. Stigma and discrimination has developed a cyclical relationship with these marginalized groups that make them more vulnerable to HIV/AIDS.

The Effect of Tourism

Studies have shown that tourist destinations are epicenters for practices of transactional sex, elevated alcohol consumption and internal migration, all of which are linked to increased HIV risk. HIV prevalence is higher amongst both male and female sex workers than in the general population (Padilla, Guilamo-Ramos, Bouris, & Reyes, 2010). Tourist destinations have also been shown to have higher numbers of sex workers meaning that there are more people having multiple sex partners. The problem with this lies in other studies that show that oftentimes sex workers develop trust with their clients and as trust increases, they are less likely to use condoms and other safe-sex practices. (Padilla, 2008). Another factor that may attribute to the high prevalence of HIV in the Caribbean is frequent external migration within the region for tourism job opportunities (UNAIDS & IOM, 2002). Many workers migrate from places within the Caribbean like the Dominican Republic and Haiti to work in other island nations like Barbados and The Bahamas (UNAIDS & IOM, 2002). Some people may migrate from places with higher rates of HIV/AIDS simply because of their country’s larger population size and could potentially introduce more disease into the other country. One study done in the Dominican Republic showed that 30% of 200 Dominican male sex workers surveyed said that they had travelled to perform sex work

abroad (Kempadoo, 1999). Additionally, drugs and alcohol also play a major role in the effect tourism has on the HIV/AIDS endemic in The Caribbean. Drugs and alcohol are important cofactors in HIV transmission. The Caribbean is flooded with all-inclusive resorts that provide unlimited access to alcoholic beverages, coupled with large numbers of nightclubs, bars, restaurants, and liquor stores. In many cases, alcohol venues are characterized by greater availability of sex workers, which correlates with higher risk of HIV transmission (Padilla, Guilamo-Ramos, Bouris, & Reyes, 2010).

Finding a Solution

All of these factors are enhanced by the stigmatization that follows them. The stigmatization of HIV/AIDS, sex work, sexuality, drug use, and gender have all lead to poor health services, harassment, abuse, discrimination, violence, poverty, and marginalization which continue the cycle of sickness amongst particular groups of people. Perhaps The Caribbean's first step towards combating HIV/AIDS is ending this stigmatization. Studies recommend that some steps to eliminate stigma include: the protection of the rights of these individuals through laws. In The Caribbean this would mean changing laws that have been in effect since the 19th century to include the needs of these individuals in healthcare service design, and to educate the public in order to address fears and attitudes like homophobia (Avert, 2018). I believe that this may change within the coming years as a result of the changes being made by larger nations like The United States of America, who send the largest amount of tourists to Caribbean destinations every year and thus contribute large amounts to the economies of these nations. Pressure from The United States could force these smaller island nations to change their laws to be more inclusive and accepting, however, this may be dangerous and drive some individuals further into hatred. They may see it as a larger country imposing their viewpoints on a smaller country. Because of this, I believe the best steps are for the global community to provide support to activist groups within these countries

instead of directly pressuring for legislative change. They must let the changes come naturally from the people within the nation rather than imposing them from afar.

The presence of LGBTQ social movements is a testament to the ability of these nations to improve. The Bahamas has been one of the more progressive Caribbean countries when it comes to LGBTQ rights and this could be due to a higher GDP and close proximity to the United States. One key aspect that can stimulate progress within these nations is tourism. The frequent migration of people from different cultures as well as Caribbean nationals returning from spending time abroad can and has been accelerating cultural changes within these nations.

The high rates of HIV/AIDS can be broken down in many different ways including HIV/AIDS rates per capita in a country as well as total number of HIV infections in a country. This may shed light on another possible way of solving the HIV/AIDS epidemic in The Caribbean. While The Bahamas has the highest rates of HIV/AIDS per capita outside of Africa, it has not received as much international intervention and help from the global community as Haiti and the Dominican Republic who have the majority of HIV infections in the region. Higher population density coupled with the lack of safe sex practice, frequent migration, and multiple partners due to sex work and drugs and alcohol consumption converts smaller countries into breeding grounds for HIV transmission. By identifying this issue and beginning to help not only countries with the greatest numbers of HIV infections but also countries with greater rates as well, will we be able to slow down the spread of HIV within the region as well as in the other countries that send tourists to The Caribbean every year.

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