HIV POLICY: A COMPARATIVE STUDY OF MOZAMBIQUE AND THE UNITED STATES

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ABSTRACT

This thesis compares two countries' policies regarding HIV/AIDS. The sub-Saharan country of Mozambique and the United States of America (U.S.) are two different countries. Each has diverse historical backgrounds and cultural influences that have created and shaped how HIV/AIDS policies are implemented. HIV/AIDS is a borderless public health issue that affects both developed and developing nations. In this thesis domestic policies of each country are compared to determine an appropriate policy response to HIV/AIDS.

The health policy structure of Mozambique stems directly from the national level and is disseminated to the provincial and district levels. This unified structure promotes a singular message about HIV/AIDS, the need for prevention efforts, scaled-up treatment and continued care of HIV-positive persons. However, due to the lack of subnational autonomy, there is little to no policy diversification for specific population groups. Additionally, infrastructure instabilities, gender related issues, educational inequalities and continued stigma surrounding HIV/AIDS affect the care and treatment of some sub-groups within the population.

At the federal level in United States, the Office of National AIDS Policy (ONAP) creates frameworks like the National HIV/AIDS Strategy. However, in order to be implemented and be effective, federal agencies, state, territorial, tribal and local governments must collaborate. This large space for interpretation of the policy by elected officials creates unique barriers to policy

implementation. The devolved structure of health care in the United States allows each state to have a different policy approach to combatting the virus, while receiving differing amounts of federal funding.

Anyone can contract HIV, and while populations are affected by the disease in one way or another, some groups are more vulnerable than others. The sub-populations most at risk for HIV transmission are those most often stigmatized and discriminated against globally. In order to create positive future change it is necessary to modify viewpoints surrounding the virus.

TABLE OF CONTENTS

LIST OF FIGURES

PREFACE

In 2012 I was sworn in as a United States Peace Corps Volunteer in Mozambique, never knowing the extent to which my life would change through this experience. During my time there I served in a small rural village for two years, and then a larger provincial capital city for an extended third year contract. For my original contract I was involved with two community-based organizations, a national organization, and a girls' youth empowerment project. The third year extension contract moved me to a larger city where I was working directly with the Mozambican Provincial Department of Health to implement a community-based adherence support group program.

The majority of my work was with the adult population or otherwise specified target populations in the community that may be at higher risk for opportunistic diseases because they were already living with HIV/AIDS. This opportunity provided an all-encompassing experience, working with a wide variety of at-risk populations in different aspects.

Through my work and life experiences in Mozambique I have noticed that the public health issues surrounding HIV/AIDS, as well as their solutions are borderless. These experiences and my education received at the University of Pittsburgh School of Public Health have piqued my curiosity about how different or similar policies surrounding HIV/AIDS prevention, treatment and care are in Mozambique and the United States.

1.0 INTRODUCTION

Since its discovery, HIV/AIDS has challenged the world in ethical, moral and legal ways. It is not only a public health issue, but a political one as well. Understanding and acknowledging the virus were hurdles within both scientific and political realms. Finding the space between science and politics is and will continue to be a daunting task. It has been over 35 years since HIV/AIDS became a leading public health issue and cause of death worldwide (Friedland, 2016). In that time there have been numerous scientific advances and changes within the political sphere surrounding the virus.

This thesis provides a comparison of two countries with respect to their policies regarding HIV/AIDS. The sub-Saharan country of Mozambique and the United States of America (U.S.) are vastly different countries, with diverse historical backgrounds and cultural influences. This thesis does not compare the two countries as whole entities, but rather it provides contextual information about each nation and informs the reader how the current policies surrounding HIV/AIDS came to be.

Topics included in the comparison range from historical events that have shaped each country's current political landscape to modern-day international collaboration that has great impact on those who are living with HIV/AIDS. A brief background about each country is provided, with a specific focus on two provinces and two states. Offering a more narrowed

attention for the reader to understand both the homogeny and autonomy that exist within the countries.

In chapter three the national HIV health policies of each country are examined to provide a perspective for the reader regarding the policies that create a framework for HIV/AIDS prevention, treatment and care within each country. Echoing the background section, a more in-depth comparison is made by highlighting the HIV policies in the previously identified provinces and states.

Chapter four examines how the HIV/AIDS policies affect populations in both countries. The section will highlight how both countries work to address the public health burden of HIV/AIDS. Additionally, attention is drawn to how HIV/AIDS is thought about from a macro policy perspective and how policies in a unified government structure differ from those in a devolved structure.

As one of the world's most serious public health and development issues, HIV/AIDS continues to affect countries in epidemic proportions. With continued research surrounding the virus and furthering knowledge about how to prevent and treat it, policies should also be modified. This thesis examines what is currently happening with policy in Mozambique and the United States, and offers suggestions as to what can be done in the future.

2.0 BACKGROUND

Human Immunodeficiency Virus (HIV) is a virus that attacks a human's immune system. If the virus is left untreated, it can diminish the number of CD4 cells, or T-cells, in a humans body reducing the ability to fight off infections and other illness ("What is HIV/AIDS?," 2016). Acquired Immunodeficiency Syndrome (AIDS) is the term used to describe the final stage of HIV infection ("What is HIV/AIDS?," 2016). Not all who are diagnosed with HIV will advance to AIDS, when a human's immune system is so compromised that it becomes vulnerable to opportunistic infections ("What is HIV/AIDS?," 2016).

During the summer of 1981, the United States Centers for Disease Control and Prevention (CDC) published the first case reports documenting HIV/AIDS in people (Friedland, 2016). In the 35 years since, HIV/AIDS has become one of the leading causes of death of men and women on a global scale (Friedland, 2016).

Within the past 15 years, there have been major advances in scientific knowledge, medical treatments and policy implementation for HIV education, prevention, and treatment (Friedland, 2016). Examples of these improvements is in the increased effective HIV/AIDS prevention tools such as condom distribution and education, increased rates of male circumcision, and expanded coverage of antiretroviral treatments for those living with HIV (Friedland, 2016). The access to antiretroviral treatment (ART) continues to expand across the global population. In 2015 it was estimated that 17 million people were receiving ARTs

(Friedland, 2016). Forms of ART are not only life sustaining to those living with HIV, but are also used as a prevention method in mother to child transmission and as pre-exposure prophylaxis for HIV discordant sexual partners (Friedland, 2016).

Although worldwide there has been a decline in new HIV infections as a result of the more inclusive education, prevention and treatment programs, many countries have not seen significant decreases in new infections in adults (Dehne et al., 2016). Since reaching the peak of 3.3 million new infections in 1997, the annual incidence of HIV is now estimated to be 2.6 million per year (Wang et al., 2016). However, through the global introduction of ARTs the number of people living with HIV has increased, and individuals are continuing to live longer with the virus. In 2015, it was reported that 38.8 million people were living with HIV (Wang et al., 2016).

HIV infection is a global pandemic, affecting every corner of the world but with an unequal geographic distribution of the most severe rates of infection (McCutchan, 2006). A majority of HIV infections have been and continue to occur in sub-Saharan Africa where it is estimated that 25.4 million people are living with the disease (McCutchan, 2006). Other areas around the world, such as North and South America, Central Asia and East Asia generally report over one million HIV infections annually (McCutchan, 2006).

Global HIV history can be categorized into three phases: first, the early years of discovery and increasing incidence; second, a decline in incidence due to the latent phase of the infection and mortality, with increasing HIV-related deaths; and third, the most recent phase, a decline of global incidence and mortality rates, but also an increase in prevalence due to a global scale-up of HIV-focused education, prevention and treatment programs (Wang et al., 2016). The increase in prevalence is due to the greater access to life sustaining ARTs. As more people

continue to enroll in treatment programs and remain adherent to medication schedules, the prevalence of people living with HIV will also increase.

According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), the only way to end the HIV/AIDS pandemic worldwide is to provide HIV treatment to all who need it. The organization developed the 90-90-90 strategy to end the HIV pandemic by the year 2030 (Jamieson, 2016). The three components, to be implemented by the year 2020, are to help 90% of all HIV-infected persons know their status, enable 90% of those persons to be enrolled in an anti-retroviral treatment program, and help 90% of infected people achieve an undetectable viral load through treatment (Jamieson, 2016). UNAIDS hopes that by reaching these targets by the year 2020, the following ten years will see a global reduction from the current HIV pandemic to a low-level endemic disease (Jamieson, 2016).

Despite the rapid global scale-up of anti-retroviral treatment in the past ten years that has provided medication to an estimated 41% of people with HIV (Wang et al., 2016), a majority of the population living with HIV are found in developing countries and regions where ARTs are disproportionately distributed. In North Africa and the Middle East only 19% of HIV positive people receive ARTs (Wang et al., 2016). In Eastern Europe ART availability for HIV positive individuals is 18.6% and in Southeast Asia 29.7% (Wang et al., 2016). The proportion of individuals living with HIV and receiving ARTs is still very low because of supply issues and access to care (Wang et al., 2016). UNAIDS has reported that many large-scale HIV prevention programs have failed due to the lack of stakeholder involvement, and that new prevention approaches and programmatic targets need to be developed (Dehne et al., 2016).

The 90-90-90 strategy attempts to address the issues of availability and access to treatment. Jamieson (2016) states that the ability to produce the anti-retroviral treatment exists; it

is not a question of production capacity but rather of the last step in the supply chain, getting medication to those who need it most. With an estimated 70% of all HIV-positive persons living in sub-Saharan Africa, Jamieson (2016) concluded that in order to treat over 28 million persons, strategic action of governments and healthcare systems will be needed to achieve and maintain high treatment coverage levels while offering services for low or no cost. With enormous treatment coverage gaps in many countries, the continued global scale up of ARTs will need commitment and coordination of governments around the world.

2.1 MOZAMBIQUE

This first section describes the sub-Saharan African country of Mozambique (se Figure 1), and provides a brief historical background. Following that is a description of how HIV/AIDS affects the population and the subsequent policy responses that have been enacted to combat the epidemic. Two of the 11 provinces, Zambézia and Gaza will be featured, to compare in a later section with two of the 50 United States that have similar population sizes.

Figure 1. **Map of Mozambique Provinces**

("Political map of Mozambique" 2002)

In 1975 Mozambique gained independence after five centuries of Portuguese colonialism, followed by a very dramatic and drawn-out 16-year civil war that ended in 1992 ("Embassy of the Republic of Mozambique, Washington DC," 2016). Therefore, Mozambique is a relatively new country, rebuilding after the lingering effects of colonial rule and war.

Mozambique has population of 99.66% African ethnicity, Makhuwa, Tsonga, Lomwe and Sena as the leading indigenous populations ("The CIA World Factbook," 2001a). Although Portuguese is the official language of the country only 10.7% of the population uses it for communication. Local dialects like Emakhuwa and Xichangana are much more predominant. Religion is also a predominant influence in the Mozambican culture. In the country 28.4% of people identify as Roman Catholic, 17.9% as Muslim, and 15.5% as Zionist Christian ("The CIA World Factbook," 2001a).

With an estimated population of 25.3 million people ("The CIA World Factbook," 2001a) and a HIV prevalence of 11.5%, Mozambique faces a massive public health concern ("HIV/AIDS," 2015). Mozambique has one of the world's highest birth rates with an average of five children per woman, that number often increasing in more rural areas ("The CIA World Factbook," 2001a). With this high replacement rate Mozambique has a very young population; 45% of all inhabitants are under the age of 15. This young population is at heightened risk for HIV transmission without appropriate prevention education. In 2015 10.55% of the adult population was estimated to be living with HIV/AIDS, and in the same year 39,000 people died from HIV/AIDS ("The CIA World Factbook," 2001a).

The first documented case of HIV in Mozambique was identified in 1986, during the height of the country's civil war, and at the start of the epidemic in the United States (Audet et al., 2010b). Due to relatively poor understanding of HIV/AIDS throughout the population and delayed access to anti-retroviral treatment the disease became an epidemic. Before 2004 it was possible to obtain ARTs only through international pilot programs (Audet et al., 2010a). In lieu of anti-retroviral treatments most HIV positive persons were given cotrimoxazole, an inexpensive prophylaxis that helps control a variety of bacterial infections (Audet et al., 2010a).

The Ministry of Health (MISAU) program Central Drugs and Medical Supplies Procurement Service controls the purchase and distribution of medicines and medical supplies to the entire country (*Evaluation of Health System Transport Capacity and Demand: Mozambique Case Study*, 2014). Only recently in Mozambique has access to ARTs increased for the majority of the population. The medications were distributed to health centers located throughout the country, and in the timespan of four years, from 2008-2012, the number of people enrolled in an

ART plan almost tripled ("HIV/AIDS," 2015). In 2008, 118,937 people were reported to be on ART, and in 2012 that number increased to 308,578 ("HIV/AIDS," 2015).

The average mortality rate from HIV/AIDS in Mozambique is estimated to be 27%, which is a large factor in why the life average life expectancy at birth is only 50 years ("The CIA World Factbook," 2001a). Disability-adjusted life year (DALY) is the number of life years lost due to illness, disability or early death. In 2013, HIV/AIDS was the largest contributor to Mozambique's DALYs ("Mozambique Health Data," 2016). Since 1990, the DALY of HIV/AIDS has increased over 200% ("Mozambique Health Data," 2016).

In addition to high HIV prevalence and limited ART resources, only 32.3% of Mozambique's population live in urban areas ("The CIA World Factbook," 2001a). With the vast majority of people living in rural locations, access to health care centers that provide education, prevention methods and treatment for HIV/AIDS is all the more limited. The infrastructure necessary to serve these rural locations is often non-existent. When bad weather occurs delivery services often need 4x4 traction vehicles, and even with those, some locations are only accessible during dry seasons (*Evaluation of Health System Transport Capacity and Demand: Mozambique Case Study*, 2014).

This compounds the epidemic in regards to access to care. It is estimated that there is only one health unit for every 15,000 people in the country (*Evaluation of Health System Transport Capacity and Demand: Mozambique Case Study*, 2014). With approximately 1,366 rural health centers in the entire country, Mozambique faces a healthcare challenge (*Evaluation of Health System Transport Capacity and Demand: Mozambique Case Study*, 2014). The MISAU healthcare workers appointed to work in these locations are often overloaded with

patient care and treatment, which affects bedside manner and time spent with individual patients (*Evaluation of Health System Transport Capacity and Demand: Mozambique Case Study*, 2014).

2.1.1 Zambézia Province

Mozambique has 11 provinces. The north-central province of Zambézia has the second largest population in the country. Zambézia boasts an area of 103,478 sq. km. and is divided into 16 districts ("Portal do Governo de Moçambique," 2008b). The provincial capital of Quelimane is located 25km from the mouth of the Rio dos Bons Sinais (“River of Good Signs”) named by the explorer and colonizer Vasco da Gama. In 1498, da Gama made port in Quelimane on his route to India and established a permanent Portuguese presence in the country ("Portal do Governo de Moçambique," 2008b). Quelimane is also the ending point of the famous David Livingstone’s west-to-east crossing of Africa in 1856 ("Portal do Governo de Moçambique," 2008b).

Over four and a half million people reside in Zambézia, yet only 193,343 individuals inhabit the provincial capital of Quelimane ("Projecções da População," 2016). This population distribution contributes to the issues surrounding the barriers to HIV/AIDS care. In 2008, the estimated HIV prevalence for adults in Zambézia aged 15-49 years was 12.6% (*Information about HIV and AIDS in Mozambique (INSIDA)*, 2009). The United States President’s Emergency Plan for AIDS Relief (PEPFAR) estimates that around 20% of all persons living with HIV/AIDS in Mozambique reside in Zambézia province ("PEPFAR Zambezia," 2015).

2.1.2 Gaza Province

The southern province of Gaza has a population of 1.4 million people, 115,752 of whom reside in the provincial capital of Xai Xai ("Projecções da População," 2016). The province has the nation's highest HIV prevalence, with an estimated 25.1% within the adult population ages 15-49 ("Mozambique HIV Prevalence by Province," 2010). Despite the high HIV prevalence, PEPFAR studies estimate that only 12% of all persons living with HIV/AIDS in Mozambique live in the Gaza province ("PEPFAR Gaza FY11 PEPFAR allocations to Gaza province," 2012).

Gaza Province is one of the smallest in the country of Mozambique with 75,344 sq. km. divided into 11 districts ("Portal do Governo de Moçambique," 2008a). Most of the province sits in the Limpopo river basin, which has caused many natural disasters for the local population ("Portal do Governo de Moçambique," 2008a). During the Limpopo river flood of 2013, three health centers in the province were completely evacuated and were not operational during the entire time period of the environmental disaster ("Mozambique Floods 2013," 2013).

2.2 THE UNITED STATES

The following section discusses the United States of America, providing a background and explanation of the political structure. The current public health burden of HIV/AIDS and how affects the population will be highlighted. A focus will be given to the policy responses that have been enacted to combat the virus. Two of the 50 states will be highlighted to compare with the two previously featured provinces of Mozambique. The following figure illustrates where the two states, Louisiana and Maine, are located within the country.

Figure 2. **Map of the United States**

("United States Maps" 2016)

The United States of America gained independence from the colonial rule of Great Britain in 1776 and experienced a four-year civil war from 1861 to 1865 ("The CIA World Factbook," 2001b). An older and established country, often considered a world superpower, the United States has an estimated population of 321.4 million. The CDC estimated that at the end of 2012, 1.2 million people in the United States were living with HIV, including an estimated 156,300 (12.8%) persons whose infections had not yet been diagnosed (*HIV Surveillance Report*, 2015).

Although HIV/AIDS poses a public health concern in the United States, its ranking within the leading causes of DALYs fell almost 75% from 1990 to 2013 ("United States, Health Data," 2016). HIV/AIDS are not among the top 25 causes of DALYS in the United States. Nor is HIV a leading cause of death in the United States. Rather, chronic diseases such as ischemic

heart disease, lung cancer and Alzheimer's are the highest ranking causes ("United States, Health Data," 2016).

The HIV epidemic in the United States commenced in the 1980s. It began with a small number of reported cases in larger cities of the northeast, southeast and west coast. Following these cases, the disease spread through the eastern seaboard of the country and then into the southern states. By the mid-1990s trends of reported HIV cases showed that only the midwestern part of the United States was not drastically affected by the epidemic (Cock & Weiss, 2000). Since the late 1990s and early 2000s there has been a downward trend in HIV incidence and HIV-related mortality primarily due to the availability and distribution of antiretroviral medication (Cock & Weiss, 2000).

Anyone can contract HIV, and while all populations are affected by the disease in one way or another, some groups are more vulnerable and at risk than others. For example, men who have sex with men (MSM) are the most affected by HIV in the United States, yet they account for only 2% of the entire population ("Men Who Have Sex with Men," 2012). Other groups in the United States that are also severely affected by HIV are injection drug users, women, ethnic minorities and most recently youth/adolescents ("Men Who Have Sex with Men," 2012).

The United States federal budget request for HIV/AIDS programs in fiscal year 2017 is $34.0 billion. It should be noted that over half of the funding of the entire HIV budget, $20.8 billion, is directed towards the domestic HIV/AIDS care and treatment of US citizens ("U.S. Federal funding for HIV/AIDS: Trends over time," 2016). The estimated lifetime cost of treating HIV from the time of diagnosis is $618,900 (Bonacci & Holtgrave, 2016).

2.2.1 Louisiana

The southern state of Louisiana has a population of 4.65 million persons ("Louisiana," 2015). In 2014, the Louisiana State Health Department stated that there were 19,612 people diagnosed and documented living with HIV. Within that population, 10,436 (53%) were diagnosed with AIDS (Gruber et al., 2016). The state ranks ninth in the nation for documented HIV/AIDS cases now (Gruber et al., 2016), which is a jump from the rank of 11th place in 2013 ("Louisiana," 2016).

In the fiscal year of 2015, the total state funding for HIV related activities such as prevention, education and treatment was estimated at $75,171,947 ("Louisiana," 2016). These funds are distributed from four sources; the CDC, the Ryan White HIV/AIDS Program, the Substance Abuse & Mental Health Services Administration (SAMHSA) and Housing Opportunities for Persons with AIDS.

Louisiana is in the final year of its first community-driven HIV/AIDS Strategy, compiled by the STD/HIV State Program and the HIV Prevention Treatment and Care Service Planning Group (Burgess & Radtke, 2014). The new program has the responsibility of providing and directing the state's multi-faceted efforts that focus on the needs of HIV-positive persons in conjunction with all community stakeholders (Burgess & Radtke, 2014). It is funded through the combined monies of the Ryan White and CDC-funded HIV Prevention and Surveillance programs, which merged together in the state during 2012 (Burgess & Radtke, 2014). This was done mainly to secure funding sources as the State General Funds decreased and eventually stopped altogether (Burgess & Radtke, 2014).

This strategy aims to help those living with HIV/AIDS in the state. There are people living with HIV/AIDS in every parish, and they are demographically diverse in age, gender, sexuality, race and socio-economic status.

Annual infections of HIV in the state contribute to the estimated $700 million in future medical costs ("Louisiana," 2016). The barriers to testing and treatment in the state include budget constraints due to the high cost of treatment, absence of educational opportunities and language services, lack of access to testing facilities and the continued stigma against HIV/AIDS in the communities (Burgess & Radtke, 2014).

2.2.2 Maine

The northern state of Maine has 1.33 million people residing within its borders ("Maine," 2015). The Maine Center for Disease Control and Prevention estimated that in the year 2014, 1,680 persons were living with diagnosed and documented HIV. Of these, 773 were reported to have been diagnosed with AIDS (*State of Maine, HIV and AIDS Epidemiological Profile*, 2016).

During the fiscal year of 2015, the total funding for HIV/AIDS related programs in the state of Maine was $7,657,027 (AIDSVu, 2016). The three main funders for these programs were the CDC, the Ryan White HIV/AIDS Program and Housing Opportunities for Persons with AIDS (AIDSVu, 2016). The CDC's funds are directly allocated for evidence-based, cost-effective prevention interventions, specifically for the at-risk parts of the state and through school programs for adolescents ("Maine 2015 State Health Profile," 2015).

Despite the progress made towards the CDC's National Prevention Goals, which emulate the National Strategic Plan, disparities exist in HIV rates in Maine. For example, those who identify as Black females in Maine represent less than one percent of the entire population, yet the rate of Black females who are living with HIV is 48.4 times greater than that of white females (AIDSVu, 2016).

The state does have five collaborative programs that comprise the overarching HIV, STD and Viral Hepatitis Program, which works to stop the spread of sexual transmitted infections (STIs) and increase the well-being of persons living with or at risk for them. One of the programs, HIV Prevention, provides HIV counseling, testing, and referral services through the paid contracted services of local organizations and health clinics. The HIV Care program works to provide persons living with HIV, medical case management services such as health care, social and mental health.

Maine has an AIDS Drug Assistance Program (ADAP) for persons living with HIV, that ensures them availability and access of anti-retroviral treatments. In 2010, data indicated that there were 795 persons enrolled in the ADAP program, and that the average cost per client was about $302 a month ("HIV, STD, and Viral Hepatitis Program," 2013). The CDC also calculated state specific costs for Maine, and estimated that $21 million was spent because of new HIV infections during one year ("HIV cost-effectiveness," 2015).

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3.0 COMPARISON

In this chapter, the governmental structures and subnational autonomy of the two countries will be explained. Following that, a further explanation of the respective national and federal level health policies will be described. Context will be given to existing social and cultural norms while focusing on how the political structures of each country dictate how HIV/AIDS is prevented, treated and cared for. In order to provide a comparison with more depth, two provinces in Mozambique, and two states in the U.S. were selected. Geographically a state and province were chosen from the northern and southern regions of the respective countries. The selection of the more detailed locations was also determined by comparable population sizes.

3.1 MOZAMBIQUE

The country of Mozambique is a multiparty republic democracy with an executive president, Filipe Nyusi, who is the head of state and government ("Sectors of Mozambique Government," 2016). In 2015, President Nyusi was elected to a five-year term and has the opportunity to serve a maximum of two terms as president. It is his duty to appoint the prime minister and Council of Ministers ("Sectors of Mozambique Government," 2016). It is also within the president’s power to create ministries. Mozambique government holds over 20 ministries, including a Ministry of

Health. The Ministry of Health in Mozambique (MISAU) has three distinct levels: national, provincial, and district.

Mozambique is composed of 11 provinces, which are subdivided into districts. The provinces of Mozambique are managed by government appointed governors, who are then elected through direct elections, allowing some degree of subnational autonomy ("Sectors of Mozambique Government," 2016). Since Filipe Nyusi took office as president at the start of 2015, the opposing party, The Mozambican National Resistance (RENAMO) has protested for subnational autonomy in six provinces ("Sectors of Mozambique Government," 2016). RENAMO was founded only one year after the country gained independence from the colonial rule of Portugal (Sapa, 2013). This group perpetuates continued acts of violence against the population in resistance to the ruling political party of Frelimo (Sapa, 2013). A peace treaty between the two parties, RENAMO and Frelimo, was signed in 1992, paving the way for Mozambique's first ever multi-party election in 1994 (Sapa, 2013).

During October of 2012 Alfonso Dhlakama, the current leader of RENAMO, began to garner new support for the resistance movement (Buchanan, 2016). Since this time, numerous violent attacks on local administrative posts, including health centers have been carried out (Buchanan, 2016). The attacks include stealing of medicines and burning of buildings such as health posts. These attacks are meant to be seen as a form of protest against the lack of subnational political autonomy. RENAMO is demanding political power over six northern and central provinces, and until this happens or another peace deal can be made, local populations and their healthcare needs are placed at risk (Buchanan, 2016).

Entrenched gender norms within the society often dictate unequal educational opportunities for women, which can further compound sexual and reproductive health outcomes

(Audet et al., 2010b). Sexual and reproductive health is oftentimes viewed in terms of maternal and infant survival during pregnancy, childbirth and post-partum. Yet societal norms that should also be considered are the decision making skills that women and girls are equipped with when it comes to, dialogue with a sex partner, purchasing abilities, and initiation of sexual activity. These factors all have an impact on the sexual and reproductive health of women. Early initiation of sexual activities for women can produce negative health outcomes such as the transmission of STIs including HIV, adolescent pregnancy and mental health trauma (Parsons & McCleary-Sills, 2014).

Although international aid and policies strive to bring educational opportunities to women regarding all of these topics, programs often do not reach those who are most in need or at risk (Hartmann, 1995). The dichotomy between rural and urban settings in regards to educational levels, language abilities, and even interaction among genders are different in the north, central and southern regions of the country (Audet et al., 2010b). Tailoring aid initiatives to each region is a challenge to funders and implementing partners, which then creates a gap in the policies meant to help the population. UNAIDS states that the populations most at risk for exposure and transmission of HIV are those that the least access to health services and care (*90-90-90, An ambitious treatment target to help end the AIDS epidemic*, 2014).

Existing gender norms in the culture stigmatize and discriminate against homosexuality. The taboo and stigma surrounding the LGBTQ lifestyle have continued to perpetuate unequal treatment and services for HIV/AIDS. Until June of 2015, Mozambique had legal doctrine that criminalized persons involved in any sort of homosexual activities (Green, 2016). Despite the repeal of this law, many health centers and medical practitioners discriminate against MSM, refusing to give treatment, care and education about prevention (Green, 2016). In a survey done

with the MSM populations of three larger cities in Mozambique, six out of ten self-reported that they were denied HIV tests and treatment (Green, 2016). This affects the HIV rates within the country to a great degree. Not knowing their HIV status could increase the rate of transmission, and therefore the HIV rates of the country.

The country of Mozambique has financial support and budgetary restraints that are different from those of the United States. A great deal of funding for HIV/AIDS-related programs and policy implementation comes from foreign donors, the United States included. Since 2003, international funding has increased by 78% in Mozambique (Oomman, Bernstein, & Rosenzweig, 2007). In 2015, PEPFAR funded Mozambique USD $331 million ("PEPFAR,"). These funds have a great impact on the evidence-based interventions that work to scale up HIV prevention services and strengthen health and social welfare, as well as providing HIV related medical equipment and treatment ("PEPFAR,").

3.2 THE UNITED STATES

In contrast, the United States of America is a two-party democratic republic that uses a federal system to divide political power between a central government and individual states ("3 Branches of the U.S. Government,"). The federal powers are delegated to the three branches of government: executive, legislative and judiciary. The president is the head of the executive branch, elected once every four years, and can serve for only two terms. The responsibilities of the president are numerous. Among the many are enforcing federal laws, proposing annual budgets, acting as commander-in-chief of US armed forces, and appointing cabinet members ("3 Branches of the U.S. Government,").

The legislative branch, more commonly known as The Congress, is comprised of the Senate and House of Representatives. This branch of the government holds the duties of passing laws and the proposed federal budget, among many others ("3 Branches of the U.S. Government,"). The representation of states in the House of Representatives is determined by the population in each state meaning that states with smaller populations have fewer members. In the Senate each state has two representatives ("3 Branches of the U.S. Government,").

In the United States, the MSM community represent a disproportionate segment of the overall HIV/AIDS rate. This sub-group is only 2% of the entire United States population and yet represents 55% of the number of people living with HIV/AIDS ("HIV among gay and bisexual men," 2016). In 2014, gay and bisexual men accounted for 67% of the total estimated new diagnoses of HIV in the United States ("HIV among gay and bisexual men," 2016). As this sub-group has the greatest burden of HIV in the United States, it continues to have an increased chance of exposure and transmission to HIV ("HIV among gay and bisexual men," 2016).

The United States is not financially dependent on international aid for domestic HIV/AIDS related programs. In the Fiscal Year (FY) of 2017, domestic HIV/AIDS related programs were financed at USD $27.5 billion. Most of those monies are directed toward care and treatment. This is significantly more than what the United States is funding for international programs such as PEPFAR. President Obama’s budget request for PEPFAR in FY 2017 is $6.76 billion ("The U.S. President’s Emergency Plan for AIDS Relief (PEPFAR)," 2016).

In the United States and Mozambique policies can prevent people from accessing care, especially those who need it most. Injection drug users and sex workers in both countries are examples of sub-populations who are criminalized for their behaviors. Yet these groups of people are two of the most at risk for the acquisition of HIV. The policies that criminalize

behaviors of injection drug users and sex workers also undermine the response to the HIV crisis by potentially overlooking individuals that need access to care and treatment (*90-90-90, An ambitious treatment target to help end the AIDS epidemic*, 2014).

The populations of Mozambique and the United States face the issue of barriers to care for HIV/AIDS. Yet the reasons for limited access to care are dependent on both the presence and absence of policies that provide and deny health care. Due to different governmental structures and financial support the two countries face continued inequities within HIV/AIDS policy and the populations it affects. Additionally, the diversity within each nation's population will have effects on the potential transmission, identification, treatment and care for HIV/AIDS.

3.3 NATIONAL HIV HEALTH POLICY IN MOZAMBIQUE

Following its civil war, Mozambique began rebuilding various sectors of government and created new policy frameworks. Included in this was an overarching policy structure for MISAU that was constructed with the aid of both the Health Sector Policy and Health Sector Recovery Program (Pose, Engel, Poncin, & Manuel, 2014). These two policy initiatives helped the Ministry of Health forge a new agenda that worked to strengthen management systems by creating more incentive for medical staff and health workers. The focus of this new overarching framework put specific attention on communicable disease control and the improvement of medical care (Pose et al., 2014).

Every six years, a new Strategic Plan for the health sector is released, after a comprehensive review and analysis of the preceding plan's conclusion ("Country Cooperation Strategy," 2014). The plan stresses the importance of positive leadership within the Ministry of

Health and the necessity of improved policy making and strategic development plans, and works to improve the transparency of external assistance and cost of foreign aid ("Country Cooperation Strategy," 2014).

The health system in Mozambique is comprised of three sectors: public, private for-profit, and private not-for-profit. The largest provider of health care coverage in the country is the public sector, covering over 60% of Mozambique's population ("Country Cooperation Strategy," 2014). In 2000, to improve health care and its availability, the country adopted a "Sector Wide Approach" (SWAp). This plan was implemented to help strengthen the leadership abilities of the Ministry of Health and to stress the importance of policy and strategic development of the health care system ("Country Cooperation Strategy," 2014).

Mozambique's national HIV/AIDS program began in 2001. With this program's implementation, significant progress has been made combatting this public health crisis. Despite this progress, a high prevalence rate of HIV still continues with the most common transmission route reported to be intimate heterosexual contact. This reported rate may be a result of lack of HIV testing and knowledge of persons within the LGBTQ community. Only as of late have there been studies done about HIV testing and associated behavioral factors of the MSM population (Nalá et al., 2015).

At the end of 2014, Mozambique's Ministry of Health along with technical partners such as the WHO, UNICEF, UNAIDS and others, developed the fourth National Strategic Plan (NSP). The plan is implemented directly by the Ministry of Health and Provincial Departments of Health, along with other partners, including the PEPFAR funded by the United States (Korenromp et al., 2015).

The current health care system policies in Mozambique are created by the Ministry of Health and disseminated to the Provincial Departments of Health. From offices located in provincial capitals, the Provincial Department of Health (DPS) oversees the health systems and all community health programs. Additionally, each provincial capital has a hospital that provides tertiary care for the provincial population (Pfeiffer, 2003). Each province is subdivided into various numbers of districts that have health centers directed by a provincially appointed individual to manage all local health programs. There is little to no autonomy in decision making for the health directors or provincial department staff (Pfeiffer, 2003).

Pfeiffer (2003) states that there are an estimated 70 rural health posts in Mozambique that offer basic first aid, information about maternal and child health, and in some cases distribute ARTs. However, it has been estimated that the entire country has only about 500 healthcare staff, including 10 Mozambican doctors and 200 nurses throughout the provinces (Pfeiffer, 2003). The following figure depicts the distribution of central hospitals, provincial hospitals, rural hospitals and rural health centers throughout the country.

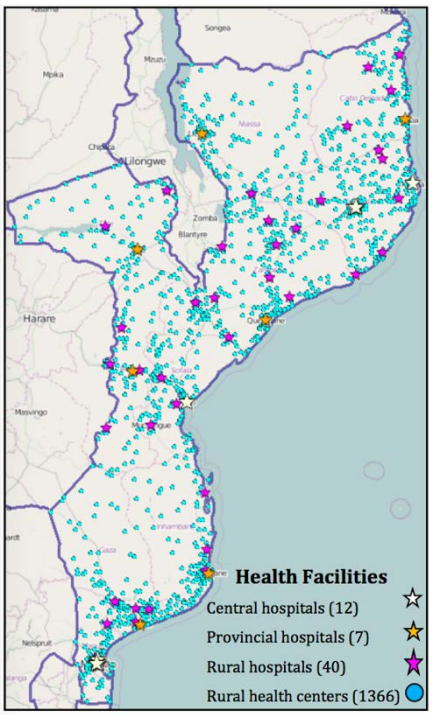


Figure 3. **Health Facilities in Mozambique**

(VillageReach, 2014)

In 1998 a private clinic opened in the nation's capital of Maputo in response to the lack of access to adequate health care. Numerous DPS-employed health care workers left their assigned posts to work at this clinic, in response to declining salaries and growing corruption (Hanlon, 2003). Following that, and the influx of international aid organizations, more and more health care professionals left Mozambique's state-run health sector and began working for various aid organizations. Many of the individuals who made this decision felt that working for the DPS did not provide adequate professional career growth and that the lack of autonomous decision-making was leading to more corruption among head officers (Pfeiffer, 2003).

In provincial hospitals and district clinics, the NSP is implemented to provide information about HIV. The healthcare system works to improve patient and community knowledge about how to prevent illness, identify symptoms of illness and where to go for medical help (Audet et al., 2013). In conjunction with this plan a large amount of international aid has been directed toward the country. The positive impact of external foreign assistance can be most clearly seen in the increase of access to ART.

The HIV epidemic in Mozambique has provoked an overwhelming response from international aid organizations. To identify the top priority areas in need of funding, Mozambique became a signatory of the Millennium Declaration September 2000, which created the Millennium Development Goals (MDGs). These worldwide goals were time-bound and quantified targets that worked to address numerous dimensions of development. The MDGs helped to mobilize government systems and private sector organizations to donate billions of dollars in international aid. Since their implementation Mozambique has scored a 3.5 out of 8.0 on the MDG progress index, which is on par for with the average score for low-income countries ("Mozambique," 2011; *Republic of Mozambique*, 2010).

The MDG progress index shows that headway is being made, while identifying gaps in priority areas that need to be addressed. For example, the distribution of prevalence of HIV by gender shows higher rates in women (18.4%) than in the male population (12.8%) (*Republic of Mozambique*, 2010). This disparity is a result of several factors, such as educational inequities between the genders, women's lack of control over reproductive and sexual health, and the vulnerability of women for transmission of HIV compared to that of men (*Republic of Mozambique*, 2010).

An example of how international aid is influential in shaping Mozambique HIV policies is the United States government initiative, PEPFAR. This program works to address HIV/AIDS, malaria and tuberculosis health issues on a global scale. PEPFAR was initiated in 2003 through positive bipartisan support in the United States Senate and House of Representatives ("PEPFAR,"). From its initiation through FY 2013, the United States government funded this program at over $52 billion ("PEPFAR,").

In 2014 Mozambique's total budget for health programs and infrastructure, including both domestic funds and international aid, amounted to US $635 million (*FY 2015 Mozambique Country Operational Plan*). For reasons unknown, the allotted PEPFAR funds were not included in this total. Almost half of the non-PEPFAR funds were directed towards the Ministry of Health, 15.7% to provincial departments of health, 16.5% to the district health centers and community programs and 11.6% to central hospitals (*FY 2015 Mozambique Country Operational Plan*). The remaining 2% was divided between the National AIDS Council and the Central Medical Stores (*FY 2015 Mozambique Country Operational Plan*).

Late in 2001 a law was adopted by the Parliament of Mozambique and approved by the President in February 2002 (in Portuguese, Lei nº5/2002) that establishes principles prohibiting discrimination of employees and job applications in the workplace on the basis of being or suspected to be HIV positive or suffering from AIDS ("HIV/AIDS Workplace Non-Discrimination," 2002). The law prohibits pre-employment HIV testing and dismissal based on HIV status and also requires that employers provide employees with HIV education ("HIV/AIDS Workplace Non-Discrimination," 2002). Article 4 of this law states that forcing prospective employees or employees to undergo compulsory HIV testing is prohibited.

To date, Mozambique has not had any court cases that deal specifically with issues related to HIV/AIDS (Amaral, 2004). All national legislation passed in Mozambique surrounding HIV/AIDS has focused on non-discrimination, principles for treatment, and protocols of health (Amaral, 2004).

Western agencies have become necessary fixtures in many developing countries' advancements. While this can be beneficial in some aspects, it also can weaken and fragment a nation's healthcare system, as is the case in Mozambique. So much of the international financial investments into the country have been based upon data collection by aid organizations, rather than the national health system (Pfeiffer, 2003). In Mozambique this is because the MISAU does not track or report upon the direct spending for individual disease categories, like HIV/AIDS within the country (*FY 2015 Mozambique Country Operational Plan*). This leads to a fragmented data collection system due to indicators and objectives that are inconsistent across agencies, which then affects the control and validity of health data (Pfeiffer, 2003).

3.4 NATIONAL HIV HEALTH POLICY IN THE UNITED STATES

In 2002 the CDC estimated that only 38-44% of adults in the United States had ever been tested for HIV. In response to that, the CDC created recommendations to health care providers about scaling up HIV testing within their respective practices, a program often referred to as "Opt-Out Testing" ("Opt-Out Testing," 2015).

The CDC advises that all healthcare providers test persons aged 13 to 64 and all pregnant women regularly, meaning that testing for HIV should be done as a routine practice in a majority

of healthcare settings, unless the informed patient declines (*Recommendations and Reports* 2006).

The intended goal of this scale-up is to increase the number of people who know their HIV status (positive or negative) and link those who are positive to supportive care and proper medication (*Recommendations and Reports* 2006). For individuals to know their HIV status is of paramount importance because it will help those who are infected to take the necessary steps to obtain treatment and counseling, and protect their sexual partners.

In 2010, through the leadership of President Obama, the White House released a National HIV/AIDS Strategy for the United States (NAHS). Before the NAHS, only two United States presidents since the late 1980s had released any sort of national plan in response to the public health crisis of HIV/AIDS (Yehia & Frank, 2011). The comprehensive NAHS was recently updated in July 2015 to incorporate scientific advances around modes of transmission and new prevention and treatment methods. The NAHS three pillars are, the elimination of HIV infections, support for those living with HIV and the eradication of HIV-related disparities ("U.S. Federal funding for HIV/AIDS: Trends over time," 2016).

The federal programs that have been funded and supported by the US government through the NAHS involve testing, prevention, treatment and care as well as research regarding HIV/AIDS. All of these components play integral roles within the three main goals of NAHS: reduction of new HIV infections, increased access to HIV care, and reduction of HIV-related disparities ("U.S. Federal funding for HIV/AIDS: Trends over time," 2016). Although this strategy has been implemented on a federal level, without further cooperation from states and other sectors of society the goals of the national plan may not be achieved (*National HIV/AIDS strategy for the United States: Updated to 2020*, 2015).

Within the federal budget request, released February 9, 2016, a specific portion was requested for HIV/AIDS, $34.0 billion. This funding is subdivided into five categories: domestic prevention, domestic research, domestic cash and housing assistance, domestic care and treatment and global or international funding. Over half of the funding of the entire HIV budget, $20.8 billion, is directed towards the domestic care and treatment of US citizens ("U.S. Federal funding for HIV/AIDS: Trends over time," 2016).

Each US state, territory, federal prison, and the military has various policies surrounding HIV. Some of them relate to criminal law and how persons are prosecuted under HIV-specific criminal statutes. According to *Ending and Defending Against HIV Criminalization: State and Federal Laws and Prosecutions* 36 states have documented arrests and prosecutions of HIV-positive persons for activities like consensual sex, spitting and biting. Thirty-two states and two US territories have specific statutes that criminalize the aforementioned behaviors of HIV-positive persons (Richardson, Golden, & Hanssens, 2010 (Updated May 2015)). Some grassroots movements have opposed laws and policies that discriminate against HIV-positive persons, but there is still unfair punishment based solely on policymakers' ignorance about the transmission of HIV and risk of actual exposure (Richardson et al., 2010 (Updated May 2015)).

In 2010 new health care legislation was implemented in the United States. The first open enrollment period of the Patient Protection and Affordable Care Act, commonly known as the Affordable Care Act (ACA), began in October 2013. Through the implementation of this act, many more individuals would be able to receive healthcare coverage through state-level insurance exchanges that are administered by the federal government ("Policy and Practice," 2014). As of November 2015, more than 90,000 persons who were previously uninsured, had enrolled in this program, some of whom are living with HIV/AIDS.

According to the CDC, a major source of medical coverage and availability of anti-retroviral medication is Medicaid. The federal-state program Medicaid and other insurers are now prohibited from denying medical coverage to those with a pre-existing condition, such as HIV/AIDS ("The Affordable Care Act Helps People Living with HIV/AIDS," 2015). Additionally, the ACA works to expand the health care infrastructure and human personnel in underserved areas through the increase in funding for community health centers. These centers serve as an important resource for low-income areas, providing anti-retroviral treatment and education to populations that are often representative of the statistical disparities for HIV/AIDS ("The Affordable Care Act Helps People Living with HIV/AIDS," 2015).

3.5 PROVINCAL AND STATE LEVEL POLICY

3.5.1 Gaza and Zambézia Provinces

Provinces in Mozambique have no autonomy in setting their own policies around HIV/AIDS. In provincial hospitals and district clinics, the programs implemented to provide information about HIV, improve patient and community knowledge about how to prevent illness, and identify symptoms of illness stem directly from the National Strategic Plan (NSP) (Audet et al., 2013).

Through this system, the government of Mozambique does not allow any policy-making autonomy within the provinces, although that would not violate the Constitution. Afonso Dhlakama, the organizer of Mozambique's main opposition party and rebel movement RENAMO, has taken up the issue of more provincial autonomy (Fauvet, 2015). Dhlakama argues that provincial-level municipalities should be given more power and autonomy (Fauvet,

2015). Many people in the northern region of Mozambique support Dhlakama's vision, despite the coercion of people while obtaining their votes through RENAMO's scare tactics of violence, murder and the destruction of infrastructure (Fauvet, 2015).

3.5.2 Louisiana Policy

In 2009, based on the number of new HIV diagnoses in the state, the CDC estimated the annual cost the state incurs because of the virus. In one year, the state of Louisiana had 1,247 new HIV diagnoses, and will spend an averaged $458 million on HIV ("HIV cost-effectiveness," 2015). This cost was derived by multiplying the number of new diagnosed cases in one year by the lifetime cost of treatment, discounting for various times of infection.

Although law exists in Louisiana that criminalizes the exposure of HIV to others, the CDC gave the Louisiana State health department $12,178,737 to implement an HIV prevention approach ("Louisiana 2015 State Health Profile ", 2015). Communities at greatest risk were prioritized and the Prevention Department of the STD/HIV Program (SHP) was established. SHP supports HIV testing and counseling, and prevention materials distribution, links people living with HIV/AIDS to partner services, and helps coordinate community planning groups. The program has four core programmatic components regarding HIV: prevention, treatment and care services, surveillance and evaluation of programs ("STD/HIV Program,").

In the state of Louisiana, a legal doctrine criminalizes HIV exposure via consensual sex, biting and spitting, even though not all types of exposure are legitimate modes of transmission and infection, such as biting and spitting. The law also states that it does not matter if there was no intent to transmit HIV or actual transmission during any of the criminalized activities (Richardson et al., 2010 (Updated May 2015)).

The legal doctrines that exist in Louisiana were created in 1918 and was originally written to address other STIs (Richardson et al., 2010 (Updated May 2015)). HIV and its routes of transmission were not discovered or fully understood for many years. However, this statute is still used to criminalize and penalize persons living with HIV (Richardson et al., 2010 (Updated May 2015)). Persons living with HIV in Louisiana are subject to legal prosecution for behaviors that have, according to the CDC, a remote possibility of transmitting HIV (Richardson et al., 2010 (Updated May 2015)).

There is also law that permits the disclosure of an individual's HIV status from test results without consent. Among those eligible to receive the personal information of an individual's HIV status, without needing the person's consent are insurers, insurance administrators, or any other person or entity involved in the payment for medical services (Richardson et al., 2010 (Updated May 2015)).

Prosecution of persons exposing others to HIV under general criminal law can include attempted murder charges. In Louisiana, participating in any number of consensual sexual activities as an HIV-positive person can result in prosecution and even imprisonment (Richardson et al., 2010 (Updated May 2015)). Additionally, discovery of HIV-positive status during conviction and sentencing can potentially result in an augmented sentence of many years (Richardson et al., 2010 (Updated May 2015)).

3.5.3 Maine Policy

In 2009, the CDC estimated the annual budgetary requirement for HIV-related programs in Maine. This figure is derived from the number of new diagnoses in the state multiplied by the

cost of treatment for a person's lifetime. With 57 new diagnosed HIV cases in the year 2009, the annual cost of HIV in Maine was $21 million ("HIV cost-effectiveness," 2015).

In 2014 the CDC awarded the Maine State Health Department just over $1million for HIV/AIDS prevention ("Maine 2015 State Health Profile," 2015). These funds are specifically allotted for the creation and implementation of evidence-based intervention in the most at-risk communities in the state. Among those interventions the CDC recommended upgrading service delivery and educational programs about HIV/AIDS in schools, with scheduled monitoring and evaluation ("Maine 2015 State Health Profile," 2015).

Maine has an HIV Advisory Committee, created to make recommendations to the governor, state and private agencies about HIV/AIDS-related policies on behalf of HIV positive persons and those at risk for the disease ("§19202. Maine HIV Advisory Committee," 2016). In February of 2009, the majority of the committee voted against a bill which would have overturned existing consent laws for disclosure of patient's HIV status in medical information shared between health care providers ("Maine Lawmakers Vote AGainst Bill to Include HIV Status in Shared Medical Records," 2009).

There is no legal doctrine or criminal statute in the state of Maine that explicitly addresses the criminalization of HIV positive persons or exposure. The state requires informed consent and post-test counseling for HIV testing, unlike others such as North Carolina, Florida, Texas, and Georgia, which do not require that an individual receive information or even notification that they are about to be tested for HIV (Richardson et al., 2010 (Updated May 2015)).

4.0 DISCUSSION

In both the U.S. and Mozambique, the governments face many opportunities and challenges in their commitment towards creating healthier populations. The countries differ in many respects: population and geographical sizes, the amount of time each has been an independent country, economies and their respective health disparities. However, because HIV/AIDS is a borderless virus, it is a public health burden and political issue for both countries. Each facing barriers to prevention, care and treatment of the virus. In Mozambique lack of access to care is often related to infrastructure such as roads and health centers while in the United States it is more common to encounter barriers in the affordability of care and services.

Due to the distinctive history of each country, government structures look and operate differently. In Mozambique the trickle-down policy structure from the national to district level promotes a unified message about HIV/AIDS, and the need for prevention efforts, scaled-up treatment and continued care of HIV-positive persons. At the federal level in United States, the Office of National AIDS Policy (ONAP) creates frameworks like the NAHS. However, in order to be implemented and be effective, federal agencies, state, territorial, tribal and local governments must collaborate. This creates a large space for interpretation of the policy, differentiation among elected officials, and unique barriers to policy implementation. The strengths and weaknesses of the two systems are highlighted in Appendix A.

On the surface, Mozambique may appear to have more health equity for those living with HIV/AIDS as the health care system provide universal coverage opportunities to all. However, infrastructure instabilities, gender related issues, educational inequalities continued stigma surrounding HIV/AIDS all contribute to the continued public health burden. Although there is universal healthcare coverage in Mozambique, only 45% of people living with HIV who are eligible for treatment are enrolled in an ART plan.

The lack of infrastructure in Mozambique contributes to health care inequalities in rural areas. The road systems are in very poor condition, which contribute to the transportation hardships to health centers (*Investing in rural people in Mozambique; rural poverty in Mozambique*, 2014). Despite international financial aid provided for construction of improved roadways, progress has been slow. There has been less activity in the northern provinces, and when that factor is combined with an above average size of rural population in the northern region, progress towards access to health care and resource distribution becomes difficult (*Evaluation of Health System Transport Capacity and Demand: Mozambique Case Study*, 2014).

Gender related factors are much more apparent in the rural communities of Mozambique. Women have disproportionate access to educational opportunities and healthcare, which can be a factor in adolescent pregnancy, HIV transmission and potential mother-to-child transmission during birth (*Investing in rural people in Mozambique; rural poverty in Mozambique*, 2014).

Across the country of Mozambique, a disproportionate number of women are living with HIV/AIDS. The WHO estimates an overall prevalence of 13.1% among women, compared to 9.2% of men ("HIV/AIDS," 2015). Many behavioral and cultural factors contribute to this disparity, including unequal access to education, care and treatment for HIV for women in Mozambique.

Similar disparities exist in the United States, though such inequalities are often founded in the differences between the diverse groups that make up its population. The country has a diverse population and in some instances racial and ethnic groups are those that are most at risk for HIV. In Maine the rate of Black females living with HIV is 48.4 times that of white females ("Maine," 2016) yet the entire Black population (men and women) represent only 13.3% of the state's population ("Maine," 2015).

International aid plays a large role in the care and treatment policies for HIV in Mozambique. However, as Pfeiffer (2003) states, "the deluge of NGOs and their expatriate workers over the last decade has fragmented the local health system, undermined local control of health programs, and contributed to growing local social inequality" (pg. 725). While international aid is given with the best of intentions, it can often have adverse effects on the host country. If specific monthly goals, such as the number of persons tested for HIV, are set for organizations in order to receive funding, employees may be overworked, numbers may be incorrectly reported, and patients are not seen as individuals, but rather statistics to diagnose, treat and discharge.

The United States is a resource rich nation and a benefactor of international aid, yet that does not mean that the domestic policies for HIV/AIDS within its own borders benefit the population. The healthcare system has a similar fragmentation regarding the nature of health care services and delivery. Due to state autonomy, there is the likelihood that there will be different HIV-related policies. This large space for interpretation of the policy and differentiation among elected officials create unique barriers to policy implementation. Each state has different policy approaches to combatting the virus, while receiving differing amounts of federal funding.

This thesis highlights a distinct difference between legal statues in Louisiana and Maine. Both states are under the same federal government structure, yet one has legal doctrine that criminalizes HIV positive persons, and the other does not. In 2014 Louisiana had a HIV diagnosis rate of 36.6 per 100,000 people while Maine had a HIV diagnosis rate of 5.2 per 100,000 people ("HIV/AIDS," 2016). Each state has different policy approaches to combatting the virus, while receiving differing amounts of federal funding.

In Mozambique there are also differences between the provinces, yet it is more in regards to the level of health care, the health infrastructure and population sizes. Zambezia province has an HIV rate of 12.6% (*Information about HIV and AIDS in Mozambique (INSIDA)*, 2009) whereas Gaza province has a 25.1% HIV rate (*Information about HIV and AIDS in Mozambique (INSIDA),* 2009). Due to sheer population estimates, about 20% of all persons living with HIV/AIDS in Mozambique reside in Zambézia province, whereas those living with HIV in Gaza province represent 12% of the population ("Mozambique HIV Prevalence by Province," 2010).

Highlighting four entities within two different governmental structures, works to show the differences between a unified and devolved government structures. It shows how various forms of policy structures work to treat and care for HIV/AIDS, while some have negative repercussions on those living with HIV/AIDS.

Additionally, the cultural intricacies within each country create microcosms in which to view the public health issue of HIV/AIDS. Inequalities exist among those affected by the virus, and those are often perpetuated by the lack of education and understanding. Ignorance to social issues that face sub-populations such as LGBTQ members will only prolong the stigma and discrimination that individuals face.

In Mozambique, health disparities with HIV/AIDS often propagated by the lack of knowledge and cultural misconceptions about the virus. A lack of understanding and continued fallacies often stem from the inequities in educational opportunities due to lack of healthcare infrastructure, trained personnel in the health sector, and language barriers. Despite the perceived streamlined governmental healthcare structure and HIV related policies, as well as an immense international aid presence, inequalities in the treatment and care surrounding HIV/AIDS remain.

In the United States, the healthcare system and the policies that affect HIV/AIDS are much less simplified than in Mozambique, so it is not surprising that inequalities exist. The states have a great deal of autonomy in their policy making decisions regarding HIV/AIDS. What should be noted for further consideration is that states that have not enacted the NSP, and others that still have legal doctrine criminalizing individuals living with HIV are nonetheless eligible for federal funding for HIV focused programs.

One of the largest parallels for comparison are the stigma and discrimination surrounding HIV/AIDS in both countries. In Mozambique, stigma exists due to the physical health outcomes resulting in untreated HIV. Weight loss from the advancement of the virus is one of the most visible side-effects of HIV. In the often physically-demanding lifestyle in Mozambique, weight loss is directly associated with sickness, and inability to afford food, care and treatment. The disease is not strongly associated with the MSM population as it is in the United States.

Only in the past year was homosexuality decriminalized in Mozambique, and a great amount of discrimination still exists surrounding the testing, treatment and care of the MSM population, even throughout the medical community. However, this discrimination is not based upon HIV-related taboos, but rather the entrenched heteronormative perspective of copulation for

reproduction. Homosexuality disregards the norms of reproduction; therefore it is misunderstood or denied in most of the country.

In the United States, similar discrimination exists in the testing, treatment and care of LGBTQ population. The MSM community is one of the most at risk for HIV transmission, and yet often underserved in healthcare settings. Layered with perpetuated cultural taboo, HIV is often still seen as a "gay disease" due to its discovery within the MSM community in the 1980s. Combined with antiquated legal doctrine, like those in the state of Louisiana dating back to 1918, HIV has never been treated as a disease, but rather a repercussion of improper life choices.

HIV/AIDS exists in every country around the world (Rotheram-Borus, Swendeman, & Chovnick, 2009). And since the early 2000s there have been major advances in the scientific knowledge and available medical treatments for people living with HIV/AIDS (Friedland, 2016). With the creation and advancement of life-sustaining ARTs, the focus now must shift towards the accessibility of this medication to all those who need it. Additional suggestions to stem the incidence of HIV/AIDS are, the incorporation of educational programs regarding transmission and prevention of HIV/AIDS, greater access to testing to provide awareness of an HIV-status, and the reduction of legal sanctions that criminalize those living with HIV/AIDS.

5.0 CONCLUSION

HIV is a borderless public health issue that has become a leading cause of death of men and women. Annual incidence of the virus is estimated at 2.6 million people per year, with infection rates affecting underserved populations (Wang et al., 2016). The number of people living longer with HIV is increasing as ARTs become more available.

Current estimates reported that 38.8 million people were living with the virus, yet only 41% of those people are receiving life sustaining ARTs (Wang et al., 2016). In low income countries such as Mozambique, it is estimated that around one-third of persons diagnosed with HIV are lost to care within three years, and of those around 40% will die (Bemelmans et al., 2016).

This percentage is affected by the limitations in access to treatment. Due to geographical constraints and lack of infrastructure and resources, populations in developing countries are often limited in receiving ARTs (McCutchan, 2006). Mozambique faces many challenges of a developing nation; poor roadways and access to health care centers, lack of human resources in the health field, and political unrest. The United States faces many internal variations that can often limit people living with HIV to care and treatment. As each state has autonomy within the governmental structure, some have legal doctrine that criminalizes HIV positive persons, while others do not.

The sub-Saharan country of Mozambique and the United States of America are two very different countries, with distinctive historical occurrences and contemporary cultural impacts. The United States of America has numerous monetary, scientific and infrastructure resources that have the capacity to create forward progress towards the decrease in transmission of HIV/AIDS. However, this resource-rich nation also has antiquated legal doctrine and a continued stigma surrounding the virus that perpetuates limitations to many human rights. This may be due to the legal approaches in the country, until new law is written and adopted, the current law stands.

Mozambique is one of the poorest nations in the world, and is still recovering from a brutal 16-year civil war. It lacks physical infrastructure, and human resources in health care are not available to the extent in which they are needed. However, the country maintains a streamlined format of health policy creation, stemming from current scientific knowledge and national implementation of policies. Mozambique faces financial burdens and is often dependent upon international aid monies, which have stipulations as to how they are spent, and therefore influence the health policy making process.

The United States, with all of its scientific and technical advances, continues to maintain an overall static policy stance for HIV-related issues. Many of the existing legal doctrines are not based on current understanding or scientific research. The autonomy of each state dictates the level of access to prevention methods, treatment and future care for those living with HIV/AIDS.

Mozambique is a resource poor nation, heavily reliant on foreign donors and outside aid for the supply of medical equipment, and medications. Yet despite these issues, the country has a clear vision on how to eradicate HIV transmission and upholds nondiscriminatory legal doctrine.

Much of the health policy surrounding HIV/AIDS provides more access to testing, treatment and adherence to medications for continued care.

International aid monies influence the creation of policies and implementation of programs. From its establishment in 2003 by President Bush, the PEPFAR initiative has funded countries around the world over $52 billion ("PEPFAR,"). In 2012, the intention of funding resources changed from prevention methods to “treatment as prevention” ("PEPFAR,"). Increasing treatment availability and promoting adherence to treatment for people living with HIV will reduce individual viral loads making it less likely to transmit the virus. Unfortunately, such a shift in policy would likely hamper educational efforts focusing on prevention methods.

It is somewhat ironic that the United States revised the aim of the international aid funds to treatment as prevention. Inside its own borders a majority of states, and the federal funding they receive is for abstinence only sexual education campaigns. From the entire federal budget only $34.0 billion was requested for domestic HIV/AIDS programs ("U.S. Federal funding for HIV/AIDS: Trends over time," 2016). Over half of that funding, $20.8 billion, was then directed towards the domestic care and treatment of HIV-positive US citizens ("U.S. Federal funding for HIV/AIDS: Trends over time," 2016).

Perhaps because Mozambique is such a relatively new nation, it has a much more progressive viewpoint on how to approach the public health burden of HIV. Stigma and taboos associated with the virus still exist in the nation. Many people are discriminated against or face severe health disparities due to their gender and sexual orientation. However, these stigmas pale in comparison to those associated with HIV in the United States.

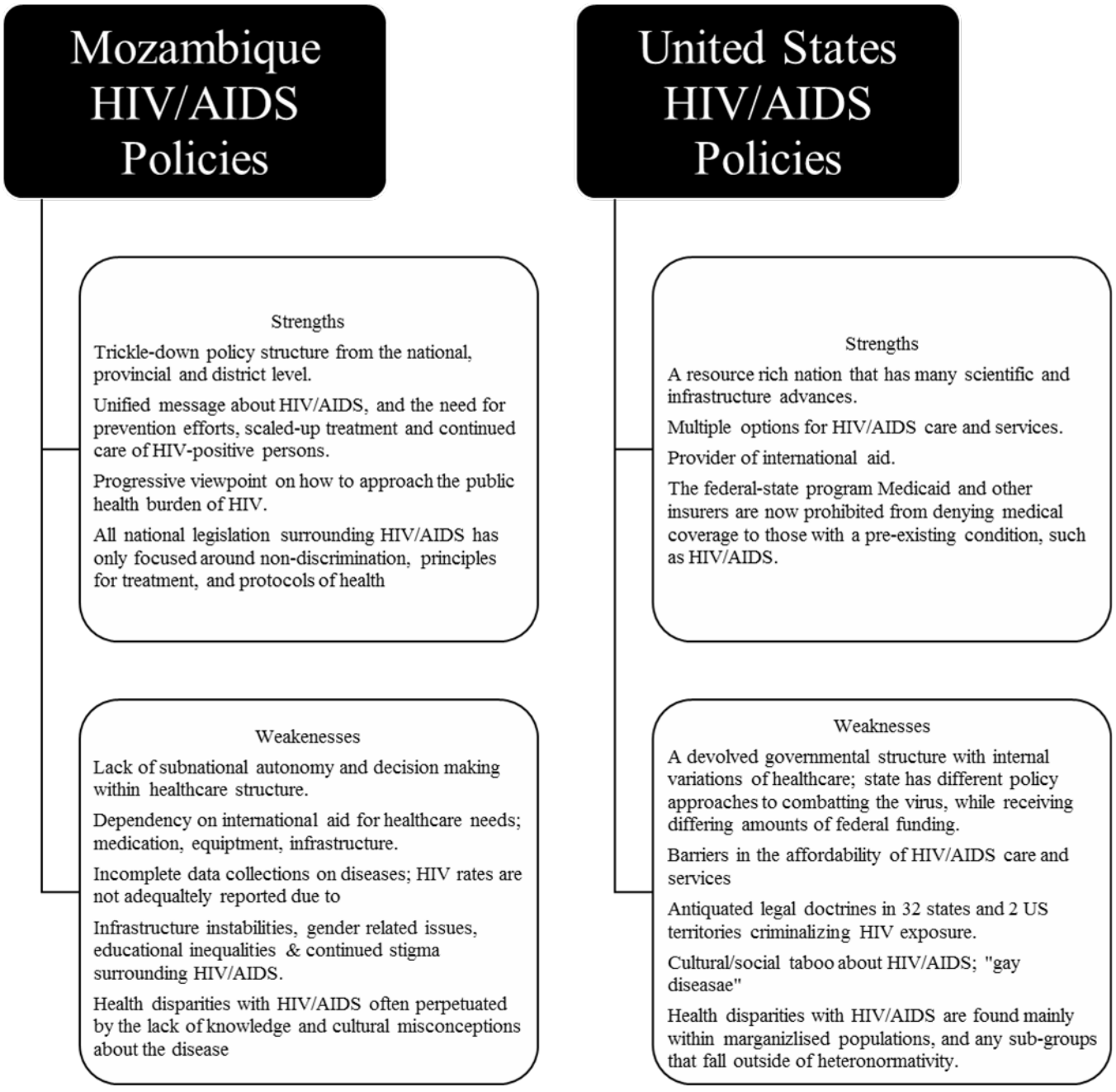
Layered with perpetuated cultural taboo, HIV is often still seen as a “gay disease” due to its origination and discovery within the MSM community in the 1980s. Combined with outdated

policies surrounding STIs, like those in the state of Louisiana dating back to 1918, HIV has never been treated as a disease, but rather a repercussion of improper life choices. Injection drug users, prostitutes, and the LGBTQ population are discriminated against because they differ from the heteronormative culture that is propagated in the United States.

Mozambique has an understanding of the disease as a public health burden, and enacts policies that change with the times. While the country does have a heteronormative perspective, similar to that of the United States, and only recently passed legislation decriminalizing homosexuality, the virus was never associated with the gay community, or seen as a "gay disease." The virus has taboo associated with it, but the stigmas surrounding it stem from the outward expression of the virus itself. Examples of outward expression are when individuals not enrolled on treatment lose a drastic amount of weight, or begin to have discolored lesions on their body, and are oftentimes sick from other opportunistic illnesses.

In conclusion, to have forward progress within the prevention, treatment and care of HIV, it is necessary to critically analyze the existing policies that surround the virus. The United States is a very rich and powerful nation with a large amount of international influence, yet that does not mean that the domestic policies within its own borders are the most beneficial for its populous. In order to create positive future change within the public health burden of HIV/AIDS it will be necessary to change viewpoints surrounding the virus. Perhaps it is time that international funding and its attached goals/outcomes are not based upon the western contexts of large heterogeneous countries, but rather created through community-based assessments of the individual smaller and more homogenous countries.

APPENDIX: COMPARISON OF POLICIES



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