ABSTRACT

Title of Thesis: International Goals Made Local: A Case Study of HIV Reduction in the Dominican Republic

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Since the discovery of HIV/AIDS, the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) have set goals to control, end, and reduce the spread of the virus. The most recent of these goals is *90-90-90: An ambitious treatment target to help end the AIDS epidemic*. This thesis will examine the likelihood of achieving *90-90-90* throughout the Dominican Republic, whose epidemic provides an example of complex social, historical, and systemic problems that shape national healthcare and its implementation. International and national health policies in the Dominican Republic call for universal and equitable access to healthcare for all. Due to a lack of funding, resources, and systematic inequalities affecting marginalized populations, these policies that boast equity and universality are not enforced. In their implementation, discrimination and stigma against groups that are particularly vulnerable to HIV infection arises in many public healthcare settings. This discrimination and exclusion create barriers to testing, treatment, and HIV-related healthcare for marginalized populations throughout the country, impeding the nation's ability to complete the *90-90-90* targets. It is therefore unlikely that *90-90-90* will be achieved by 2020 in the Dominican Republic.

International Goals Made Local: A Case Study of HIV Reduction in the Dominican Republic

By

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AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
CDC	Centers for Disease Control and Prevention
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CONAVIHSIDA	National Counsel for HIV/AIDS (Dominican Republic)
COPRESIDA	Presidential AIDS Counsel (a body of CONAVIHSIDA) (Dominican Republic)
DALY	Disability Adjusted Life Year
DHS	Demographic and Health Surveys
FSW	Female Sex Workers
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
IVDU	Intravenous Drug Users
LGBT*	Lesbian, Gay, Bisexual and Trans*
MDG	Millenium Development Goals
MSM	Men Who Have Sex with Men
PEN	National Strategic Plan on HIV/AIDS (Dominican Republic)
PEPFAR	President's Emergency Plan for AIDS Relief (United States)
PIH	Partners in Health
PLWH	People Living with HIV
PrEP	Pre-Exposure Prophylaxis
SDG	Sustainable Development Goals
SESPAS	Ministry of Public Health and Social Welfare (Dominican Republic)
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
UNAIDS	Joint United Nations Programme on AIDS
UNGASS	UN General Assembly Special Session
USAID	United States Agency for International Development
WHO	World Health Organization

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Chapter 1 Introduction

The Centers for Disease Control and Prevention (CDC) described the first known cases of acquired immune deficiency syndrome (AIDS) in a *Morbidity and Mortality Weekly Report* in 1981. Throughout the course of the year, the only known cases occurred in two populations traditionally seen as "immoral": young gay men and intravenous drug users (IVDUs). The media, government, and leading political figures addressed the disease through a moralistic framework, which has shaped attitudes and behaviors toward infected populations and HIV/AIDS as a disease (Kazanjian 2014). This stigma lingers today, as HIV continues to disproportionately affect many marginalized groups and communities (Ministerio de Economía, Planificación, y Desarrollo 2014, 83).

Like moral stigma, stigma grounded in fear played an important role in the social contextualization of HIV/AIDS. Knowledge of the retrovirus was extremely limited for the first few years of the pandemic[1], when an HIV/AIDS diagnosis meant certain death. The medical community was unsure how the disease spread, had no means to effectively treat it, and no cure. The physical symptoms of dying from AIDS were dramatic and horrific, including wasting and Kaposi's sarcoma[2]. It was killing otherwise completely healthy young men. For these reasons, the epidemic has also been shaped and controlled by fear of the virus and those infected. Today, there is still no cure, but if an HIV-positive individual adheres to his or her antiretroviral therapy (ART) he or she can expect to live as long as the average person (Bradley et al. 2014, 1115).

[1] While there were cases before 1981, I will classify HIV/AIDS as a pandemic after the year it was first officially recognized as a health condition.

[2] Kaposi's sarcoma is an opportunistic infection associated with AIDS. It is a type of cancer that affects the lymph nodes and manifests in red colored spots throughout the skin (Kazanjian 2014).

Soon after the discovery of AIDS, medical experts realized they were dealing with a pandemic. Since its discovery, the World Health Organization (WHO) and the subsequently created Joint United Nations Programme on HIV/AIDS (UNAIDS) have set goals to control, end, and reduce the spread of the virus. The most recent of these goals is *90-90-90: An ambitious treatment target to help end the AIDS epidemic* (UNAIDS 2014). UNAIDS created the *90-90-90* plan in 2014 as a detailed strategy on how to achieve the Sustainable Development Goals, Target 3.3: end the AIDS epidemic by 2030 (UN 2015a). The plan has three main components to achieve by 2020: "…90% of all people living with HIV will know their status," "…90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy," and "…90% of all people receiving antiretroviral therapy will have viral suppression." If these components are achieved by 2020, UNAIDS holds that the AIDS epidemic will be over by 2030 (UNAIDS 2014, 1).

Today, an estimated 37 million people are infected with HIV, only 16 million of which received ART in 2015. Globally, only 54% of people are aware of their HIV status (WHO 2016). *90-90-90* represents the international community's continued political commitment to fighting the HIV pandemic. To achieve the three components, it is imperative that this political will translate into action. Drastic increases in funding, voluntary testing, and availability of ART throughout the world are necessary, especially in developing countries.

Within the context of the global pandemic, the Caribbean region holds the second highest prevalence of HIV, with transmission occurring primarily through heterosexual sex (CESDEM and ICF International 2014). In that region, the highest prevalence of HIV is on the island of Hispaniola, comprised of the countries of Haiti and the Dominican Republic (Rojas et al. 2011, 306). As of 2014, the national HIV prevalence in Haiti and the Dominican Republic are 1.9%

(UNAIDS 2016a) and 1% (UNAIDS 2016b), respectively. Although the Dominican Republic does not have the highest nationwide prevalence in the region, the country provides a prime example of the social, political, and cultural factors that can influence and complicate effective responses to epidemics within the Caribbean.

This thesis will evaluate the likelihood of successful implementation of *90-90-90* through a case study of the Dominican Republic's HIV epidemic. While few, if any, countries are actively implementing *90-90-90*, it is important to assess how current policies and medical practices will either aid or impede the goals of the plan. My thesis will explore how international and national policies interact in the Dominican Republic and in what ways they will influence the achievement of *90-90-90* within its borders. To better inform predictions, I referenced prior international HIV-related health goals and their reports (see Section 1.3) to assess the likelihood in achieving the targets set forth by *90-90-90*.

International and national health policies in the Dominican Republic call for universal and equitable access to healthcare for all. However, they often fall short in their implementation: discrimination against groups that are particularly vulnerable to HIV infection occurs in many public healthcare settings. This discrimination and exclusion create barriers to testing, treatment and HIV-related healthcare for marginalized populations throughout the country, impeding the nation's ability to complete the *90-90-90* targets. Throughout the Dominican Republic, HIV disproportionately affects marginalized communities such as Haitians, men who have sex with men (MSM), sex workers, intravenous drug users (IVDUs), and, to an increasing extent, women (Ministerio de Economía, Planificación, y Desarrollo 2014, 83). All of these groups face additional barriers to healthcare access than the average Dominican (Rathe 2010).

Due to a lack of funding, resources, and systematic inequalities, these policies that boast equity and universality are not enforced. The implementation of policy goals from words on a page to reality is a challenge for international law and public health throughout the world. The right policies do not necessarily lead to action, accountability, or resource and funding allocation. Because of the existing social and economic constraints within the Dominican Republic, it is unlikely that the public healthcare system will provide all people living with HIV (PLWH) the care they need. Likewise, foreign aid is insufficient to sustainably support HIV prevention and treatment measures throughout the international community. While aid may be helpful for a period of time, it is essential that countries that have not already done so build their own systems of support for PLWH.

1.1 Breaking Down *90-90-90*

Each of the targets outlined in *90-90-90* have separate implications. To achieve any of the three goals, a great deal of cooperation and resources from both the Dominican Republic and the international community are necessary.

For 90% of PLWH to be aware of their HIV status, testing must be readily available in all communities and everyone must be encouraged to be tested, with targeted outreach efforts toward the most at-risk groups. This is especially true in rural areas where the virus can easily spread through a community and in populations of lower socioeconomic status, where HIV-related stigma is still common (Rojas et al. 2011, 310-312). For example, an HIV and hepatitis C outbreak shocked a small town in conservative rural Indiana in 2015. The outbreak grew out of intravenous drug use. Similar to its initial detection in the United States in 1981, people throughout Austin, Indiana met HIV with fear and stigma: “I thought it was just a homosexual disease…I didn’t ever think it would be in my small hometown” (Goodnough 2015). Rumors

and misinformation about the virus beleaguered the epidemic – a common occurrence when an outbreak begins in a place that has not previously dealt with HIV. The stigma that arises out of misinformation and rumors can lead to detrimental barriers for people seeking HIV testing and counseling. This example highlights the fact that HIV/AIDS remains a highly stigmatized disease, even today. For the *90-90-90* plan to achieve its first target globally, it is therefore essential that public health officials and governments increase HIV education outreach efforts to combat common stigmas and fears associated with the disease.

The next target, to have 90% of people with diagnosed HIV infection receiving ART, will be a challenging process. Considering less than half of the infected population is currently on ART, over a 40% increase in treatment coverage will need to occur globally (WHO 2016). The history of funding for ART and its availability to all PLWH is a complicated one; it is a story of struggle and intense activism (Kazanjian 2014). At the beginning of the pandemic, medication approval was a slow and bureaucratic process. Even then, access to these life-saving drugs was not seen as a human right until the late 1990s. However, through protest and media usage, students and activists petitioned for and successfully contributed to lowering the cost of ART (Stonington 2016). Because of these efforts, many generic brands of first line drugs[3] are now relatively inexpensive and provide a cost-effective means for HIV treatment (UNAIDS 2014, 6).

Yet there are barriers on the healthcare continuum of HIV treatment. To remain on the less expensive first regimen, it is crucial that the person takes the right amount at the right time and does not miss any doses (AIDSinfo 2016). Another barrier to accessing ART is travel time and transportation (Posse et al. 2008, 908). Once diagnosed, PLWH must take ART for the remainder of their lives and although medication regimens vary, they require relatively frequent

[3] The "…first regimen usually offers the best chance for taking a simple regimen that affords long-term treatment success and prevention of drug resistance" (AIDSinfo 2016, K-3).

refills (AIDSinfo 2016). In 2014, the World Bank reported that 47% of the global population lived in rural areas, comprising 70% of those below the poverty line (World Bank 2016). Because many countries have health facilities concentrated in urban centers, it can be difficult to reach PLWH in rural areas. Likewise, it can be expensive and time consuming for PLWH living in rural towns to travel to an urban center for testing and treatment. To achieve the *90-90-90* targets, it is crucial that clinics and treatment centers recognize the need for rural outreach in HIV education, testing, treatment, and counseling.

ART, when taken properly, improves the infected person's health by increasing CD4 counts[4] and decreasing viral loads, which in turn reduces the risk of spreading the virus (NIH 2014). In order to have 90% of people receiving ART to achieve viral suppression, they must strictly adhere to their medication regimen. The demands of taking these medications can prove extremely challenging, as some PLWH face barriers to ART adherence such as mental illness, stigma, lack of understanding of the consequences of not taking ART consistently, and difficulties in obtaining access to these medications (AETC National Coordinating Resource Center 2015).

Studies show that people with higher levels of education are more likely to adhere to their ART regimen. Literacy is an influential component of adherence: although some doctors explain the importance of ART to their patients, many PLWH must rely on written information to understand their medications. A person who is illiterate or who has poor reading comprehension will not be able to access these written educational resources and consequently may not understand the importance of maintaining their ART regimen (Mayer and Stone 2001, 868). Additionally, some medications require refrigeration or must be taken with food, which many

[4] An indicator of how well the immune system is fighting off the virus (AIDS.gov 2015).

PLWH do not have access to due to homelessness, poverty, and differing cultural norms (AIDSinfo 2016). These examples provide insight into some of the difficulties that PLWH face in maintaining adherence to ART. The *90-90-90* plan emphasizes the benefits of treatment as prevention, as it is one of the best and most practical ways to reduce new cases of HIV. Therefore, to achieve the targets, governments and public health agencies must address these barriers to adherence.

Throughout *90-90-90*, UNAIDS highlights the theme of cost-effectiveness in providing ART to PLWH (UNAIDS 2014). The cost-effectiveness analysis is a useful tool in "…assessing the gains in health relative to the costs of different health interventions" (Jamison 2006, 42). Typically, cost-effectiveness is measured in a ratio of the cost of an intervention divided by the "resulting change in health status" (Jamison 2006, 43) in a monetary unit/DALY[5]. The plan argues that it is more expensive to leave HIV untreated, as high state and international expenditures can arise from the onset of AIDS[6] (UNAIDS 2014). Due to increased competition for generic first line ART regimens, prices have continued to drop since the turn of the millennium (Doctors Without Borders 2013). This reasoning provides an argument for the cost-effectiveness model in handling the HIV pandemic. Importantly, achieving a high level adherence for a large percentage of the population has a greater cost-effectiveness than doing so in a small population[7] (Jamison 2006, 49). Although some scholars are critical of using a cost-

[5] Jamison defines the disability-adjusted life year (DALY) as "A unit for measuring the amount of health lost because of a particular disease or injury. It is calculated as the present value of the future years of disability-free life that are lost as the result of the premature deaths or cases of disability occurring in a particular year" (Jamison 2006, 43).

[6] These include medical expenses, loss of productive economic labor, and the cost of orphaned children in need of social support (UNAIDS 2014).

[7] A high level of adherence in a large population would cost 350-500 USD per DALY and avert 5,000-20,000 DALYs per 1 million USD spent. In a small population, "Because of very limited

effective analysis to justify health interventions[8], it is a widely accepted tool employed throughout the field of public health to predict and analyze the effects of interventions. For this reason, contextualizing international health goals within the cost-effectiveness model may rally more support for the *90-90-90* plan among the nations of the UN.

In addition to its cost-effectiveness, *90-90-90* emphasizes the importance of quality treatment and health outcomes (UNAIDS 2014). The Dominican Republic lags in these two areas: although healthcare coverage is extensive, resources are often spread thin (Rathe 2010). In the case of HIV/AIDS, ART shortages plagued the country from 2009 until 2013 due to a decrease in international aid and a lack of a national budget allocation for the medications (SIAPS 2014).

An exciting point to note about the *90-90-90* targets is that "Across the region [of Latin America and the Caribbean]…current trajectories suggest that it is entirely feasible to ensure that 90% of all people living with HIV will have been diagnosed by 2020 in a manner consistent with human rights principles" (UNAIDS 2014, 18). While this is an intriguing possibility, another human rights concern arises if this trajectory were to be true: WHO currently advises that all people diagnosed with HIV initiate ART immediately following diagnosis to improve their health outcomes (Doherty and Baggaley 2015). This guideline would require an overall global increase in expenditures on HIV/AIDS treatment of 12 billion USD from 2015 to 2020 (AVERT 2015c). Due to financial constraints, resource limitations, and the omission of certain groups

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gains by individual patients and the potential for adverse changes in population behavior, there is the possibility that more life years would be lost than saved" (Jamison 2006, 49).

[8] The use of the DALY in the cost-effectiveness model is widely debated. Anand and Hanson argue that due to the interconnection of health in all facets of life, interventions outside of the health sphere may lead to gains within that realm. Therefore, the DALY, used in a cost-effectiveness model, does not provide valuable information on where to allocate health resources and funding (Anand and Hanson 1997, 699).

living in the Dominican Republic from receiving public healthcare, it is unlikely the *90-90-90* targets will be achieved in the country.

1.2 A Brief History of the Dominican Republic and Anti-Haitianism

Christopher Columbus landed on the shores of the island of Hispaniola in 1492. Colonization, the transatlantic slave trade, military occupation, and domestic dictators thereafter shaped the history of the Dominican Republic. The Spanish, French, Haitians, and the U.S. military held interspersed periods of control from the end of the fifteenth century to the beginning of the twentieth century (Sagás and Inoa 2003).

By the end of the sixteenth century, the initial agricultural and extracted wealth of Hispaniola had run dry and the colony was no longer a valuable asset: "…what remained was a mostly poor, racially mixed remnant that clung to the fertile soil for survival" (Sagás and Inoa 2003, 34). In the mid-sixteenth century, the French founded a colony on the west side of the island, where Haiti is today. This settlement began the division of the eastern and western sides of Hispaniola and the animosity between them: wealthy French colonists to the west and the remnants of Spanish colonization to the east. Haiti established independence in the midst of this period, largely due to rising racial tensions between colonizers and slave populations. Once established as a nation, Haiti annexed the eastern side of the island in 1821, with the consensus of most Dominicans, as Haiti was a democratic republic that had abolished the slave trade (Sagás and Inoa 2003, 74).

However, the two portions of the island remained culturally distinct. In 1844, Dominicans fought a bloody battle against the Haitian army to gain their independence. Following that year, dictatorships were the political norm in the Dominican Republic, although the U.S. army held a brief period of occupation in the early twentieth century. The most

infamous of these dictators, Rafael Trujillo, carried out an oppressive political regime from 1930 to 1961, when he was assassinated and the country established itself as a democracy (Sagás and Inoa 2003). Trujillo aimed to unite the country through a shared Dominican identity that explicitly excluded Haitians. He strengthened the border between the two countries and began a process of "Dominicanization," killing over 18,000 Haitians and dark skinned Dominicans (Howard 2001, 157). Due to the separate colonial histories, Dominicans associate themselves with the Spanish colonizers and Haitians with inferiority. Anti-Haitian sentiment is still prevalent throughout Dominican society today, where race plays an important role in perceived social status (Howard 2001). It is important to note that "Haitianism" is associated with dark skin, thus interlinking race and nationality throughout the island. This association has led to a great deal of animosity toward Haitian immigrants in the Dominican Republic and harsh immigration and naturalization policies (See Section 2.1).

Today, many Haitians seek work in the Dominican Republic, as there are more opportunities for economic success (Cohen 2006). They often live in *bateyes*, taking migrant work in the sugar, tobacco, and coffee industries (Simmons 2010). *Bateyes* are characterized by poor living conditions and the absence of public services, including schooling for children (Bernier 2003). Reflective of their native country, HIV prevalence in *bateyes* is much higher than in the general Dominican populations (CESDEM and ICF International 2015). Due to this fact and the wider variety of literature and research of Haitians living with HIV in the Dominican Republic, this thesis will have a greater focus on Haitians as a marginalized group disproportionately affected by HIV (See Chapter 4).

1.3 Methodology

This thesis developed through an extensive literature review, analysis of current international policy on HIV/AIDS, and national healthcare laws in the Dominican Republic. First, and most importantly, I read through *90-90-90* to better understand the goals and actionable steps presented for achieving the target. To narrow my focus for this thesis, I chose to use the Dominican Republic as a case study for the achievement of the plan. In the summer of 2015, I studied abroad at the Pontificia Universidad Católica Madre y Maestra (PUCMM) in Santiago, Dominican Republic, the second largest city in the nation. Throughout that time, I took classes in public health and participated in community health outreach through the university. Additionally, I made a connection with the Clínica de Familia La Romana, one of the largest HIV-related organizations on the island.

Throughout my time in the Dominican Republic, I learned a great deal about their healthcare system. When I returned, I read and translated their current healthcare law, in addition to their national HIV laws. National healthcare legislation is extremely important to the achievement of the *90-90-90* plan, which states: "Removing laws and policies that impede testing and treatment efforts for key populations is essential to achieving the…target" (UNAIDS 2014, 13). There is an emphasis on human rights when teaching health professionals in the Dominican Republic, which I also witnessed first-hand, and is in agreement with current healthcare policies (Rathe 2010). However, during our rural field component, it became apparent that resources within clinics were limited and quality of care was often lacking. For this reason, I became interested in the distinction between policy and action within their healthcare system.

My literature review also brought to light the great inequities within the Dominican Republic's current health system. The new healthcare law, created in 2001 along with the social

security system, was designed with human rights and equity in mind; however, many academics have come to criticize the implementation of the current system and the ways in which resources and money are distributed. Marginalized groups are often excluded from the healthcare continuum in the country and face additional barriers to healthcare access (Rojas et al. 2011). Socially marginalized groups are also those that are the most disproportionately affected by HIV (Ministerio de Economía, Planificación, y Desarrollo 2014). It is therefore imperative that this thesis addresses the needs of marginalized communities where HIV is prevalent in the Dominican Republic, as there must be targeted outreach to these groups to achieve the *90-90-90* plan.

In collecting data, I have gone through the Demographic and Health Surveys (DHS) of the Dominican Republic from 2013, including a supplementary survey, which provides further information on HIV/AIDS in the *bateyes* of the country, where many Haitians reside. I used these two datasets to help assess approximately where the country stands today in combating their HIV epidemic, including the availability of medical resources and the levels of HIV-related stigma throughout the country. I used DHS data[9] for both Table 4.1, which shows the averages of accepting attitudes toward PLWH in the *bateyes* and the Dominican Republic. Averages were compared between *bateyes* and the country data using a paired T-test (α of 0.05, 95% confidence interval) in SPSS. I conducted five tests to determine if there would be a statistical difference between the two datasets in any of the questions[10] or total acceptance[11]. These results are displayed in Figure 4.1.

[9] DHS surveys a large sociodemographically representative sample of the Dominican population (CESDEM and ICF International 2014).
[10] See Section 4.1.
[11] DHS categorized "total acceptance" as someone who answered with non-discriminatory attitudes toward all four HIV attitudes questions.

International and national organizations have yet to review progress made toward the targets set forth by *90-90-90*. There is no published data specifically addressing progress toward the new targets, as only a year has passed since the initiation of the goal. Because the *90-90-90* plan is an international target, I used information from the Millennium Development Goals (specifically Goal 6.A: to halt and begin to reduce the spread of HIV/AIDS by 2015), also known as MDGs, to determine the likelihood of the plan's achievement both globally and within the Dominican Republic (Ministerio de Economía, Planificación, y Desarrollo 2014, 80). The United Nations (UN) has tracked progress toward Goal 6.A, both globally and nationally, in Millennium Development Goal Reports, which include general trends and predictions in the prevalence and incidence rates of HIV. I read the *Millennium Development Goals Report 2015* to find the most recent information and analysis on the progress of MDGs throughout the world. The most recent data available from the Dominican Republic is their *Millennium Development Goal Report of 2013*, which I used to gauge progress on Target 6 within the country. This report also provided estimates based on trends from 2000-2012 to predict how close to the goal (halting and reducing the spread of HIV) the nation would be in 2015. I used these estimates, taking into account actual data from the 2013 Demographic and Health Survey and the Millennium Development Goal Report to most accurately assess these predictions.

This thesis brings together the most recent available data on HIV in the Dominican Republic, international and national health policy within the country, and builds upon previous publications focused on HIV in marginalized populations in the Dominican Republic. It is important to note, however, that the theories proposed in this thesis may be open to other explanations: in the health-related biosocial world "A causes B" is almost never the case. HIV is a disease that incorporates social, cultural, political, and economic issues. Every epidemic is

unique, in populations and locations. It becomes particularly complex because of its higher prevalence among marginalized populations (IVDUs, sex workers, and MSM, among others) that face additional layers of stigma and barriers to healthcare.

1.4 Literature Review

Throughout my research, I have come across numerous academic works assessing the validity and reality of the accessibility of universal healthcare in the Dominican Republic. There are many assessments of the new national healthcare system, but little has been reported concerning the progress made since its ratification.

In a recent World Health Report, Magdalena Rathe argues that the 2001 shift in healthcare policy: "…has lacked genuine political will and has been set back by the conflicts of interest…" (Rathe 2010, 3). She argues that the prevalence of HIV is high in the Dominican Republic because of inequalities and institutional deficiencies, which she claims are also the causes of educational failures within the country. Rathe is ultimately critical of the health and educational institutions of the Dominican Republic due to the absence of quality services and the pervasiveness of government corruption and political favors (Rathe 2010, 7). She makes a relevant note to this thesis in explaining that anecdotal information about the new national healthcare system is not necessarily reflective of the policy's principles of equity and universality (Rathe 2010, 12). Perhaps the most relevant comment to this thesis is Rathe's take on healthcare policy and reform:

> In reality, it is not always enough to define a law for modern, comprehensive, profound, and well-intentioned reform. It is about a project whose implementation is made difficult by concurrence, not always evident but determining, of all the social-political forces and the intricate connection of their components that are not easily perceived (Rathe 2010, 17).

This comment may be applied to the *90-90-90* targets in a more general sense as well. Although the intentions of the plan are admirable, a top-down policy that does not explicitly address issues of resources and funding will likely face difficulties in overcoming the political, social and economic forces that are intertwined with the disease and PLWH. This report provides an overarching analysis of healthcare in the Dominican Republic, which helped to shape my understanding of the outcomes and reality of the new healthcare system.

There are numerous smaller-scale HIV-related studies conducted in the Dominican Republic each year, many of which are based out of Clínica de Familia La Romana. Clínica de Familia La Romana is an NGO that partners with a diverse range of medical schools and universities in the United States, such as Columbia University and Northwestern University. Many of these studies focus on medication adherence and relate to specific populations, such as women and Haitians, due to the disproportionate prevalence of HIV in these groups. Chapter 4, which focuses on stigma and marginalized communities, will utilize these studies to unfold how epidemics are unique among different populations throughout the country and the barriers that these populations face in access to treatment and retention in care.

In *The HIV/AIDS Epidemic in the Dominican Republic: Key Contributing Factors*, Rojas et al. note: "…little peer-reviewed literature exists on the subject of governance and HIV/AIDS prevention. Only a single recent publication has addressed this issue as it relates to Hispaniola, and this was from the perspective of Haiti" (Rojas et al. 2011, 307). This quote highlights that most academic work on HIV/AIDS on the island of Hispaniola focuses on Haiti. This academic focus on HIV in Haiti is due to the higher prevalence of the virus on the western side of the island (UNAIDS 2016a), which also points to the importance of addressing HIV as it relates to Haitians living within the Dominican Republic.

Rojas et al. provide a general overview of the epidemic in the country, specifically addressing key populations affected by HIV. The article also delves into the "sociocultural risk factors" (Rojas et al. 2011, 306) and stigmas associated with HIV/AIDS throughout the Dominican Republic. It speaks to the importance of NGOs in combating the epidemic domestically, as they have played a critical role in prevention, treatment, and surveillance efforts. However, Rojas et al. point out that because these organizations are funded through international means, they become somewhat autonomous and may contribute to the "…lack of integration of services into the healthcare system," stigma, and discrimination against PLWH (Rojas et al. 2011, 307). The article ends with recommendations that public health agencies must put more time and resources into operationalizing HIV prevention and treatment programs, in addition to strengthening governance and infrastructure to broaden access to healthcare (Rojas et al. 2011, 314).

This thesis will build upon an extensive academic body of work focused on the divide between Haitian and Dominican people and how this divide expresses itself in access to healthcare and public services. In *Structural Violence as Social Practice: Haitian Agricultural Workers, Anti-Haitianism, and Health in the Dominican Republic*, David Simmons addresses the inaccessibility to healthcare of Haitians living in the *bateyes*. The article discusses the operationalizing of anti-Haitianism "…through various legal, political, cultural, and economic practices that collectively serve to pathologize, marginalize, and generally disenfranchise Haitians…" (Simmons 2010, 11). Through a survey of 370 migrant Haitian workers living in *bateyes*, Simmons concludes, "Geographic segregation, access to transportation, occupational and environmental health challenges, and negative treatment by doctors and other healthcare professionals…emerged as salient impediments to health and well-being [of Haitians living in

the *bateyes*]" (Simmons 2010, 10). This article points to the difficulties that many Haitians living with HIV would face in accessing testing and treatment, both of which are required for the country to be successful in achieving the *90-90-90* targets.

In *A Gap Between Ideals and Reality: The Right to Health and the Inaccessibility of Healthcare for Haitian Migrant Workers*, author Stephanie Leventhal describes barriers in Haitians' access to care through a historical, political, and legal lens (Leventhal 2013). This article examines Dominican healthcare laws and how they include or exclude Haitians from receiving care in a system that boasts equity and universality (Leventhal 2013, 1258). She argues that migrant Haitians are "persons" as defined by the Dominican Republic's constitution and domestic laws, thus granting them the right to service at public clinics. Part II of this article describes how undocumented Haitians do not actually receive the healthcare guaranteed to them by international and domestic law due to ineffective implementation (Leventhal 2013, 1265). This work points to the importance of enforcement mechanisms in both international and domestic healthcare policies. For the new national healthcare system and the *90-90-90* plan to be successful in the Dominican Republic, health related policies must be actively and effectively enforced.

There is also a host of academic work related to ART and how medical personnel and treatment services can achieve improved coverage and patient adherence to HIV regimens. I have pinpointed one particular article that outlines the benefits and consequences of a large segment of the global population receiving ART, which the *90-90-90* targets seek to achieve. In alignment with the cost-effectiveness method Desvarieux et al. discuss four main objectives of population-based ART: to maintain economic stability, to achieve distributive justice, to curb the HIV epidemic, and to reduce morbidity and mortality (Desvarieux et al. 2005). Population-based

ART, the authors argue, will only be cost-effective in a certain area if a large portion of the work force is affected by HIV/AIDS. This may arguably be the case for the Dominican Republic, where HIV disproportionately affects Haitian migrant workers.

Because the *90-90-90* targets emphasize treatment as prevention, it is crucial to understand what is happening in the clinics on smaller, everyday scales. Distribution and availability of ART, in addition to accessibility of healthcare services will ultimately determine if the *90-90-90* targets can be achieved in the Dominican Republic.

1.5 Significance

This thesis will begin the conversation surrounding the realistic achievement of the *90-90-90* targets in the Dominican Republic and perhaps the world. While WHO and UNAIDS set out consistent goals for the AIDS epidemic, it is important to explore their plausibility in different national contexts, in addition to the possibility for global achievement. For some countries, there is no obvious convergence between international goals and national policies; international goals seem to represent utopian ideals. While this thesis specifically addresses *90-90-90*, the broader theories proposed about its actual achievement may contribute to a conversation surrounding the effectiveness of international law and the international bodies, such as the UN and WHO, that propose these goals.

Because of the *90-90-90* target's inherently international nature, it is crucial that the plan be contextualized in both its global framework (Chapter 2) and its national scope (Chapter 3). Chapter 4 will examine the social implications of HIV in the Dominican Republic through a brief history of the disease and the island of Hispaniola. It will then examine how these histories shape current action or inaction at the local level. To achieve the goals of *90-90-90* in the Dominican

Republic, the government must be able to align their policies and laws with those goals and enforce them. For this to occur the country will require a great deal of resources, both monetary and medical, and quality of care must begin to take precedence in all clinics, public and private alike. The contribution of NGOs in the local context will also be discussed.

There have been notable international successes in disease eradication. With the creation of WHO came the advent of innumerable campaigns to eliminate common illnesses. Most noteworthy, the smallpox eradication campaign proved successful upon the complete elimination of the disease in 1977 (Stonington 2016b). This incredible feat was followed by a period of optimism and faith in international health bodies and medicine in general. When international organizations set goals regarding disease, they often have the ultimate target of eradication. Yet, for many diseases, the biology of the microbe make its eradication much more complicated than just administering a vaccine, as was done with the smallpox eradication campaign. There is currently no vaccine or cure for HIV, and none might ever be found, making the focus on harm prevention rather than disease eradication the most effective strategy. However, I argue that a goal such as the *90-90-90* targets, which outline specific actions to be taken and statistics to be met within a limited timeframe, will be unachievable without the specific resource and funding allocation necessary to achieve the targets worldwide (Ministerio de Economía, Planificación, y Desarrollo 2014).

Chapter 2 International Policy and *90-90-90*

In 2014, UNAIDS created the *90-90-90* targets to guide prevention and treatment strategies that would halt the transmission of HIV globally by 2030 (UNAIDS 2014). This is not the first time, and likely not the last, that the international community has agreed upon a plan to eradicate the virus. While policy statements project a clear and ideal picture of how the world will overcome the disease, such projections often conflict with reality. Thirty-five years of experience in handling the pandemic shows consistent patterns of limitations on the biosocial aspects of identifying and treating the disease among many populations. Complicating matters, HIV disproportionately affects groups that have been historically marginalized and ostracized: the lesbian, gay, bisexual, and trans*[12] community (LGBT*), IVDUs, sex workers, women, and, more generally, those of lower socioeconomic status (Ministerio de Economía, Planificación, y Desarrollo 2014, 83).

The Millennium Development Goals originated in 2000 and constituted a 15-year project to fight poverty and to improve overall wellbeing for people throughout the world. To continue this work after 2015, the UN created the Sustainable Development Goals (SDGs), which include targets to achieve by 2030. The SDGs continue to address issues such as gender inequality, hunger, and infectious disease, but expand to include issues of peace, economic growth, and climate action, which the MDGs lacked (UN 2015b). Goal 3 of the SDGs, "Ensure healthy lives and promote well-being for all ages," includes the target to end infectious disease epidemics, including AIDS (UN 2015a). This goal also includes a target to "ensure universal access to sexual and reproductive health-care services, including…information and education" by 2030 (UN 2015a). These particular targets highlight the importance of *90-90-90* in achieving Goal 3 of

[12] The asterisk (*) is used to include all people who identify as trans- in some way (transsexual, transgender, etc.).

the SDGs: the *90-90-90* plan outlines the strategies and global responses necessary to achieve this goal.

While international organizations and NGOs play a crucial role in creating global policies and implementing them, it is essential that these organizations work both with and for national governments, in addition to understanding the histories and cultural values of each population they serve to provide comprehensive and quality services. Because these highly sophisticated and rational international organizations are aware of the role that stigma plays in the HIV pandemic, they create goals to expand access to care and mitigate that stigma. However, there can be a disconnect between policy making at the international level and implementation at the local level (See Chapter 4).

Rojas et al. describes the role of international organizations and NGOs in the Dominican Republic:

> Of great importance are the private nonprofit organizations and the international organizations that are focused on implementing HIV testing, prevention, and surveillance procedures. The substantive international funding for HIV/AIDS prevention and treatment programs has created the sense that they are independent and autonomous, contributing to the lack of integration of these services into the health care system and even increasing the stigma and discrimination of PLWHA (Rojas et al. 2011, 307).

This quote points to the complexities of international health interventions and summarizes the concern of many academics and health professionals. The complicated relationship between efforts, or lack thereof, by national governments and international organizations to improve health outcomes is applicable to many countries that utilize foreign support. In emergency and acute situations, underlying causes are not solved through international funding and aid. Providing foreign support during short-term disasters does not help to resolve any structural problems that may have caused or worsened the situation (Farmer and Mukherjee, 122). In *Haiti*

After the Earthquake, Paul Farmer, a co-founder of the NGO Partners in Health[13] (PIH), believes that to create lasting and worthwhile change, it is necessary to work *with* national governments (Farmer and Mukherjee, 122). Although PIH concentrates its work in Haiti, its mission extends to the borders of the Dominican Republic, where HIV disproportionately affects migrant Haitians (CESDEM and ICF International 2015). The work of NGOs, such as PIH, helps to mitigate some of the inequity, stigma, and barriers to access at this local level.

2.1 Contextualizing the *90-90-90* Plan Within International Human Rights Law

The *90-90-90* plan places an important emphasis on human rights considerations: "The only way to achieve this ambitious target is through approaches grounded in principles of human rights, mutual respect and inclusion" (UNAIDS 2014, 2). The international community looks to the Universal Declaration of Human Rights (UDHR) as a foundation upon which to build an understanding of human rights. The UDHR defines a "…common standard of achievement for all peoples and nations" and develops a common framework encompassing the ideals of human rights (UN 1948). Although it is not legally enforceable internationally, the UDHR can be enforced through certain national courts, making states responsible for choosing which policies to adopt and in what ways they will be enforced.

Article 21 of the UDHR defines an important human right related to *90-90-90*: that public service is available to all in their country (UN 1948). The declaration also prescribes health as a human right (UN 1948, Article 25). Health, as described by WHO, is "…a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"

[13] See Chapter 4 for details on PIH in the Dominican Republic. Paul Farmer and colleagues founded PIH in 1987 with a mission "…to provide a preferential option for the poor in health care. By establishing long-term relationships with sister organizations based in settings of poverty, Partners in Health strives to achieve two overarching goals: to bring the benefits of modern medical science to those most in need of them and to serve as an antidote to despair" (PIH 2016).

(WHO 1948). The Dominican Republic provides an example of national policies that align with international law in health and universal care. The right to public services is particularly important in the country, where healthcare is considered a public service according to national social security and healthcare laws (National Congress 2001 and Ministry of Labor 2001). Both the right to public services and healthcare are wholly encompassed, and sometimes cited, in healthcare law in the Dominican Republic. However, widespread discriminatory practices and beliefs, in addition to lack of effective enforcement, may exclude some of the most at-risk populations from receiving HIV related care (See Chapter 4).

Although the Dominican Republic seeks to achieve universal access to healthcare, in the context of policy surrounding HIV there is a conflict between discrimination, reputation, and the rights of individuals and communities. The UDHR deems freedom from discrimination, equality before the law, and the right to privacy and reputation as human rights (UDHR 1948). In the case of PLWH, these lines are blurred in certain circumstances that involve arguments regarding the "public good." For example, domestic HIV laws are often vague in defining who is at fault for cases where a PLWH that is unaware of his or her status transmits the virus to another person. These cases may be the fault of the clinic or medical personnel who did not disclose an HIV-positive test result to the patient. Yet, in the eyes of the law, the PLWH could be punished for unknowingly spreading the virus. If the government and/or community have the right to punish someone for unknowingly infecting another person with HIV, it brings into question how the individual's freedom and reputation can be maintained as outlined in the UDHR. These complicated cases can create a 'hierarchy of rights' within the UDHR, where PLWH may actually be at a disadvantage because of their disease status.

Today, largely due to the work of HIV/AIDS activists in the 1980s, much of the world has adopted HIV-testing anonymity policies and laws focused on combating discrimination against PLWH, including the Dominican Republic (National Congress 2011). The social and legal history of the HIV virus demonstrates the need for clear and continuously progressive policy shaped by accurate scientific knowledge. The Dominican Republic is not the only country that maintains laws that criminalize certain aspects of HIV transmission, where PLWH are often punished for clinic and provider negligence in providing test results (Hanssens et al. 2014)

The most directly related and potentially effective international policies for PLWH in the Dominican Republic are the Declaration of Commitment on HIV/AIDS (2001) and the Political Declaration on HIV/AIDS (2006)[14]. Similar to the formatting of *90-90-90* in relation to the SDGs, the Declaration of Commitment on HIV/AIDS outlines ways in which to achieve MDG 6. It creates specific and time sensitive targets in leadership, prevention, and support and treatment, to name a few. The Declaration also includes a section on HIV/AIDS in relation to human rights, where all rights as outlined by the UDHR are upheld for PLWH throughout the world (UN General Assembly 2001). PLWH in the Dominican Republic may look to the Declaration of Commitment on HIV/AIDS as a means through which to enact change and demand that their country and policymakers hold themselves accountable when the rights of PLWH are violated. However, it is important to note that the targets in this declaration were all to be completed either on or before 2015. The year 2015 has come and gone and many of the goals outlined have yet to

[14] The UN assembled a meeting to draft this document, which reaffirms international commitment to end the pandemic (UN General Assembly 2006). In 2011, a UN General Assembly High-Level Meeting on HIV/AIDS convened, where Member States affirmed and committed to intensifying their efforts in combating the pandemic (UN General Assembly 2011). This June, the UN will host another High-Level Meeting on HIV/AIDS to further their commitment to *90-90-90* and SDG 3 for the first time since their conceptions (UN General Assembly 2015).

be achieved. This declaration, therefore, has implications for *90-90-90*'s achievement: if the goals of MDG 6 and the targets as outlined by the Declaration of Commitment on HIV/AIDS were not completed in 15 years, achieving *90-90-90* in five years is unlikely.

In addition to the UDHR and the UN Declarations on HIV/AIDS, there are countless other internationally recognized and ratified documents that protect the rights of many marginalized groups that are disproportionately affected by HIV/AIDS. The Dominican Republic has signed and/or ratified many of these treaties, including, but not limited to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the Convention of the Reduction of Statelessness. Additionally, the Dominican Republic has ratified both the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the International Covenant on Civil and Political Rights (ICCPR) (UN General Assembly 1966a and UN General Assembly 1966b). In the context of *90-90-90*, the ICESCR plays a particularly important role because it guarantees the right to healthcare for all people residing in signatory countries. According to the Constitution of the Dominican Republic, these international laws are considered to hold just as much power as domestic law (Pomares 2008, 84).

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the Convention on the Reduction of Statelessness are two of the most relevant pieces of international legislation to PLWHA in the Dominican Republic at the present time. Globally, women are disproportionately affected by HIV/AIDS (AVERT 2016). In the Dominican Republic, CEDAW "protects" women from domestic violence and inequality (UN General Assembly 1979), although *machismo*[15] is deeply engrained into everyday culture and

[15] "Machismo has been defined as [a male] being authoritarian within the family, aggressive (Ingoldsby 1991), promiscuous, virile, and protective of women and children (Vasquez-Nuttall *et al*., 1987). A component of machismo includes support of the traditional female role of sexual

CEDAW is not completely and effectively enforced. In a 2013 submission to the Committee on the Elimination of All Forms of Discrimination Against Women, the Open Society Justice Initiative and the Caribbean Migrants Observatory[16] note that the country has a lot of progress to make to uphold its obligation to CEDAW. They urge that further effort must be made to protect the rights of women of Haitian descent, as outlined by CEDAW (Open Society Justice Initiative and the Caribbean Migrants Observatory 2013). This kind of international document is a prime example of the role of enforceability and accountability in a nation. Although the Dominican Republic ratified these international treaties, ratification does not necessarily guarantee changes on a smaller, everyday scale. While international organizations attempt to hold all signatories accountable, it is difficult, if not impossible, to address such deeply rooted societal problems through legislation.

The Dominican Republic signed the Convention on the Reduction of Statelessness in 1961, although it did not enter into force until 1975 (UN General Assembly 1961). Today, there is a humanitarian crisis over the statelessness of Haitians living in the Dominican Republic, many of whom were born in the country but do not have formal paperwork to prove their nationality. The Convention allows for the adoption of citizenship by any person aged 18 to 21 that has been living in the nation for a certain period of time (UN 1961, Article 1.2b). Additionally, if there is no "…proof to the contrary…" that a stateless person was born outside the country of residence, the individual may be granted nationality within that state.

However, the Dominican Republic's signature on the Convention on the Reduction of Statelessness has not led to its ratification or its enforcement within the country. In 2013, the

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submissiveness, virginity until marriage, and female responsibility for child rearing and nonfinancial household maintenance (Vidal-de-Haymes *et al*., 1994)" (Bull 1998).

[16] Both organizations are NGO-affiliated.

Dominican constitutional courts ruled that children of undocumented parents were not citizens of the Dominican Republic. As of June 2015, this policy has been slightly modified to create a possible path to citizenship. Haitians can now apply for residency status, but a majority of them have not yet done so. This process is laborious and highly bureaucratic and many Haitians have been and continue to be deported from the Dominican Republic. Haitians are also the country's most disproportionately affected group of PLWH. Due to race and perceived citizenship status they are subject to daily discrimination (Simmons 2010). Many Haitians living in the Dominican Republic are now facing the additional stressor of being deported (Katz 2016). As long as this humanitarian crisis and discrimination against Haitians continues, there is little reason to expect that the HIV epidemic can be controlled on the island and the achievement of *90-90-90* will be unlikely. This citizenship policy may increase barriers in access to basic healthcare for Haitians throughout the country, in addition to treatment for those that are HIV-positive.

2.2 Other International Policies Guiding HIV Treatment Strategy

Because *90-90-90* focuses primarily on treatment targets, it is important to examine current WHO guidelines on ART and pre-exposure prophylaxis (PrEP). WHO currently recommends that all HIV-positive people initiate ART immediately following diagnosis, although this recommendation varies by country based on resource availability (Doherty and Baggaley 2015). This expansive coverage represents a major shift in global treatment policy. Since 2003, when WHO first created their guidelines, treatment has been based upon a patient's CD4 count, an indicator of how well the immune system is fighting off the virus (AIDS.gov 2015). These guidelines have since been refined based upon new scientific evidence, which shows that the earlier treatment starts, the better the outcomes for the patient (Doherty and Baggaley 2015). They include the use of ART for all PLWH and the use of pre-exposure

prophylaxis (PrEP) for at-risk populations. While access to ART has vastly expanded in the past decade, the Dominican Republic's formal national policy is still to treat only those with a CD4 count below 350 cells/mm^3 (this was the WHO's recommendation in 2012). As of 2014, WHO recommends a CD4 count of less than 500 cells/mm^3 to initiate ART for PLWH in the Dominican Republic, but this was only "done in a small number of treatment sites" (Doherty and Baggaley 2015). This example demonstrates how national policy and implementation in regards to HIV is not necessarily aligned with international guidelines in the country.

The more advanced implementation of global policy can likely be attributed to the work of NGOs throughout the island that focus efforts on HIV treatment and prevention. Without the adoption of the most up-to-date approach toward HIV treatment, the Dominican Republic will likely not be able to reach the goals set forth in *90-90-90*, no matter the funding and resources available. Access to ART and the resulting suppression of viral loads are crucial to ending the pandemic and achieving the *90-90-90* targets, as having an undetectable viral load greatly reduces the chances of transmitting the virus (UNAIDS 2014). To maintain suppressed viral loads, patients must strictly adhere to their medications, as missing pills and breaking the regimen allows the virus to develop resistance (Mayer and Stone 2001). The national government must continue and expand funding allocation for ART and make an effort toward more expansive outreach to marginalized and disproportionately affected populations.

While ART reduces morbidity and mortality and suppresses viral loads for PLWH, taking PrEP reduces the likelihood of HIV transmission in serodiscordant couples[17]. PrEP may therefore play an equally important role as ART in high-risk communities, as both help to decrease incidence rates. As of 2015, WHO recommends that serodiscordant couples use PrEP,

[17] One partner is HIV-positive and one partner does not have the virus.

in addition to those that are at a "…substantial risk of HIV infection…" (Doherty and Baggaley 2015). Given these guidelines and the current climate surrounding HIV in the Dominican Republic, the most at-risk groups include the marginalized populations such as Haitians, sex workers, and MSM. However, due to the many barriers in access to care, these marginalized groups may not able to obtain PrEP (Tran et al. 2013). Expanding access to these medications is another key tool in the realization of the *90-90-90* targets. If everyone in the Dominican Republic had access to ART and PrEP, as WHO recommends, *90-90-90* would have a great chance of success.

2.3 Financing Antiretroviral Treatment in the Dominican Republic: International Aid

In the last years of the MDGs (2010-2015), the Dominican Republic faced considerable challenges obtaining funding for ART and thus making it available throughout the population. The Global Fund to Fights AIDS, Tuberculosis, and Malaria provided over 39 million USD to the Dominican Republic from 2003 to 2012. This financial support was vital to the health of many infected PLWH at the time, as the former national healthcare system did not include a budget for ART due to its costliness. Even with this international aid, the country faced major challenges in treating and monitoring HIV-positive patients by 2010. At this time the Dominican Republic no longer received aid from the World Bank, the United States President's Emergency Plan for AIDS Relief (PEPFAR), or the Clinton Foundation for HIV-related purposes (SIAPS 2013). Resources for HIV testing and treatment, including ARTs were recurrently low and out-of-stock leading to non-adherence, which can threaten the treatability of the virus (Tran et al. 2013).

Until 2013, the country did not contribute any financial resources to covering the cost of ART, even though the National Strategic Plan on HIV/AIDS (PEN) theoretically guaranteed

universal access to treatment (Rathe 2010). This disconnect between policy and implementation represents a fundamental dichotomy of the HIV pandemic in the Dominican Republic. The dichotomy between policy and action will be the biggest challenge to achieving the *90-90-90* targets in the Dominican Republic, as policy takes a great deal of time to operationalize and in certain instances is never implemented. By 2011, even with its commitments to achieving the MDGs and the Declarations on HIV/AIDS, the national government had yet to allocate or plan for any sort of monetary support for ART (SIAPS 2015a).

As international aid dried up, the government of the Dominican Republic negotiated for lower pricing on generic brands of ART (SIAPS 2013). These generic brands present a viable avenue for maintaining adherence to treatment: the cheaper drugs are first-line and moving to a second-line regimen greatly increases the cost of medication (Tran et al. 2013). In 2013, following data analysis for ART budgeting in 2012, the country contributed nearly two million dollars to purchase ART, filling a much-needed gap in financial coverage for the medications (SIAPS 2015a). While the Dominican Republic still does depend, at least to a degree, on NGO programs and international financial aid to combat their HIV epidemic, some progress has been made in recent years due to the incorporation of HIV treatment into the national health budget. Because the national budget for ART is now determined through primary epidemiological data, this effort shows a sustainable step in combating the virus, as long as money is still allocated and the country prioritizes treating and ending its epidemic in line with international and national health and HIV related policies.

2.4 Predicting Outcomes

The MDGs of 2000 to 2015, particularly MDG 6, may be the most accurate way to predict outcomes for the *90-90-90* targets. MDG 6 was a goal to combat HIV/AIDS, malaria,

tuberculosis, and other infectious diseases. More specifically related to *90-90-90* was Target 6.A: to halt and begin to reduce the spread of HIV/AIDS by 2015 (Ministerio de Economía, Planificación, y Desarrollo 2014). The goal was not met in any country, but there was an overall global reduction in incidence rates. During this fifteen-year period, most developing countries reduced the number of new infections and there was an overall global increase in ART coverage (UN 2015c). This latter point bodes well for *90-90-90* if ART coverage continues to expand.

Although Target 6.A was not achieved in the Dominican Republic, the incidence rates of HIV dropped dramatically in the latter half of the early 2000s[18]. The UN's final MDG Report of 2015, however, is cautionary in lauding global improvements – the MDGs have become a telling example of the lack of services and resources available to individuals of low socioeconomic status and those belonging to marginalized groups (UN 2015c). This inequitable access to resources is exemplified within the 2013 MDG Report from the Dominican Republic, where estimates of HIV prevalence in the general population are below 1%, yet the LGBT* community has a 6.1% prevalence and the IVDUs have an 8% prevalence (Ministerio de Economía, Planificación, y Desarrollo 2014, 83). While the national MDG report boasts of the likelihood in achieving universal treatment by 2015, it notes that this may not be quality treatment (Ministerio de Economía, Planificación, y Desarrollo 2014). The lack of quality treatment will have a detrimental effect on the *90-90-90* targets and their possible achievement in the Dominican Republic.

The internationally accepted measure for standard of living, the Human Development Index (HDI), may help inform how to achieve the *90-90-90* targets country to country. The Index takes into account three important indicators: life expectancy (long and healthy life), education,

[18] In 2001, there was an estimated 7,700 new HIV cases in the Dominican Republic. In 2014, this number had dropped to 2,400 new HIV cases (AIDSinfo 2014).

and per capita earnings. These measures help policy makers and NGOs determine how to distribute resources and target interventions. For 2014, the Dominican Republic was in the "High Human Development" category and ranked 101st out of all nations (United Nations Development Programme 2014a). However, when taking into account the inequality-adjusted HDI and the Gender Inequality Index, the Dominican Republic has a significantly decreased HDI (United Nations Development Programme 2014b). A decrease in HDI for inequality indexes indicates a large gap between the rich and poor in the Dominican Republic. While many Dominicans live well above national averages, there is a vast portion of the population that is excluded from the current public and private health, financial, and educational systems. Those left out are likely marginalized and stigmatized groups, such as Haitians, MSM, IVDUs, and sex workers. Additionally, in 2013, 41.1% of the population of the Dominican Republic lived in poverty (The World Bank 2016). For this reason, the *90-90-90* targets may be difficult for the Dominican Republic to achieve. The marginalized groups that are affected by HIV/AIDS in the country are the least likely to receive the care, treatment, and support that they need.

If the *90-90-90* plan is to be achieved, there must be a high level of accountability by the international community for nations to uphold and support sustainable HIV testing, counseling, and treatment programs. Its achievement will require some streamlined international system of HIV data and reports from all countries on progress being made toward the *90-90-90* targets. The ultimate question, however, lies in the enforceability of this international policy. In the Dominican Republic, where resources are often limited, marginalized populations have a higher prevalence of HIV, in addition to more barriers to care (Ministerio de Economía, Planificación, y

Desarrollo 2014). This implies that the most high-risk populations will likely not be able to access the care that would be necessary for the success of *90-90-90*.

Another important detail is that international aid does not solve existing long-term structural problems that may lead to a future epidemic. Utilizing data and providing national funding for HIV treatment was an incredibly important and sustainable step for the Dominican Republic. In moving forward, it is critical that international organizations and NGOs that work in the country partner with the national healthcare system to increase the quality of care and provide additional support. While initial estimation appear optimistic, to truly end the epidemic within any country it is essential that higher-risk populations receive the care they need and rightfully deserve as required by international policy and law.

International organizations address the HIV pandemic and PLWH in a progressive manner, yet international policies and goals do not necessarily translate to national political action or local, smaller scale implementation. International organizations recognize and attempt to combat the problem of stigma as a barrier to access for many marginalized groups of PLWH. Although the Dominican Republic has signed, ratified, and even cited (See Chapter 3) international policies within their own laws, there is not enough political mobilization and action by the government to enact all of these international policies.

Chapter 3 National Policy and *90-90-90*

In 2001, the Dominican Republic's national government reformed the social security and the health system policies to expand insurance coverage, providing universal access to public services. It is well documented that the health reform has been slow in its implementation and must still improve in areas of quality and equity (Rathe 2010). The gaps in coverage and access have been reportedly difficult for women (Rojas et al. 2011) and Haitians[19] (Simmons 2010). While other marginalized groups disproportionately affected by HIV (IVDUs, sex workers, MSM, trans* community, etc.) may face additional barriers to general healthcare, these barriers are not as well documented in the particular case of the Dominican Republic. To assess the national policies in the context of *90-90-90*, I will examine how likely they are to allow for universal access to HIV testing and counseling, in addition to ART for all populations disproportionately affected by the virus. Key factors for the achievement of the plan at the national level include policy making, implementation, and funding. In practice, stigma and preconceived notions about HIV and its treatment play an important role in influencing the creation and manifestation of policies into reality (See Chapter 4).

This chapter will analyze and evaluate two of the main laws in the Dominican Republic relating to the rights of PLWH: the General Health Law 42-01 and the National HIV Law 135-11. It will then describe how these laws may or may not lead to actions that will further the goals of *90-90-90*.

[19] This chapter will build off of Stephanie Leventhal's argument that "…undocumented Haitian migrants are 'persons' under Dominican law" who have the right to a fully subsidized social security and insurance benefits from the government, as anyone with unstable and low incomes is entitled to (Leventhal 2013,1258-1262).

3.1 Social Security System in the Dominican Republic

While this thesis will not explore the country's Social Security Law 87-01 in depth, there are a few aspects of the Dominican social security system that are particularly important for PLWH. According to the Social Security Law, there are different layers of financial support that the government will provide depending on an individual's income and employment status[20] (Ministry of Labor 2001). In terms of health, the Social Security Law officially places responsibility of the disease burden on the state: all citizens have the right to be adequately protected from disease (Ministry of Labor 2001). The medical benefits included in public insurance are available to all residents of the Dominican Republic (USA Social Security Administration 2011). Law 87-01's main role is to ensure that the country's population has universal and equitable access to healthcare through some form of insurance (Leventhal 2013, 1261-1262).

The Social Security Law establishes that public health centers provide free services for any person that is a beneficiary of the Dominican social security system. However, in practice, many are still forced to pay for their public health clinic visits and treatments:

> For example, in 2007, only forty-four percent of all patients who consulted a public hospital reported that those public health services were free, thirty-six percent said they had to pay everything out-of-pocket, and only twelve percent reported that their insurance covered their costs. Even though the law stipulates that service at public hospitals is supposed to be free, in reality close to half of the expenditure on health is funded by direct payment. (Leventhal 2013, 1266).

Additionally, "catastrophic" diseases are excluded from coverage, including treatment for HIV infection. In 2008, PLWH must have had a CD4 count of less than 200 cells/mm^2, a "high viral

[20] There are two regimes, contributive and subsidized. The contributive regime is financed through workers that get paid above minimum wage and their employers. Those working below minimum wage or without a stable income are entitled to the subsidized regime, which is paid for by the government (Leventhal 2013, 1262).

load", or an opportunistic infection[21] to be qualified to receive ART subsidized by the government. This medication's availability was only made possible because of international aid and resources, as the Social Security Law 87-01 of 2001 specifically exempted ART from public health insurance coverage. In 2012, the government finally addressed the needs of allocating more national funds to ART coverage by creating a national budget based on epidemiological data. This budget was put to use throughout the country in 2013 and allowed for a nearly 20% increase in ART coverage. It is important to note that this funding from the national government is used to subsidize the cost of ART and is not considered a part of insurance.

Public insurance coverage has still not expanded to include ART medications. In 2015, PLWH living in the Dominican Republic raised this issue once again (SIAPS 2015b). That same year, the country ratified a new essential medicines list, which functions as a guide to the procurement of medications covered by public insurance. Although this is a step toward expanding coverage to include ART in a manner consistent with international norms, anecdotal information about medication availability has differed from policy recommendations throughout the country (Rathe 2010). This makes it difficult to ascertain whether ART is provided based on WHO country recommendations and whether PLWH are paying out-of-pocket costs for their treatment. The combination of this information leads me to conclude that while the national budget for HIV has helped to expand coverage of ART, the *90-90-90* target to have 90% of PLWH on ART will not be possible throughout the country. Public health insurance must cover the cost of ART to guarantee 90% of all PLWH in the Dominican Republic are on antiretroviral medicine. Expanded insurance coverage will ensure that PLWH do not pay out-of-pocket costs

[21] An opportunistic infection is a set of diseases associated with the onset of AIDS.

that could hinder their ability to obtain medications and remain adherent to their medication regimen.

3.2 General Health Law (42-01)

Both the Social Security Law and the General Health Law are grounded in efforts to further social justice throughout Dominican society, as outlined by their constitution (National Congress 2001). The General Health Law 42-01, ratified in 2001 with the Social Security Law 87-01, begins by emphasizing the importance of health policy, as it is responsible for creating and maintaining the wellbeing of a population. It defines health as "…a human and inalienable right that should be promoted and fulfilled by governments and states through the biological, psychological, social, cultural and moral development of each human being" (National Congress 2001). The country has thus framed health policy and education around the idea of "health as a human right," which represents an important effort by the government of the Dominican Republic toward achieving their universal healthcare system.

The universal and comprehensive healthcare, as outlined in the General Health Law 42-01, will be achieved through "…decentralization and devolution…" to encourage more community members to participate in their local public health sectors. While the principles of "decentralization and devolution" allow tailoring to specific community needs, many local healthcare clinics and facilities may be inadequately prepared to take on this responsibility due to shortages in resources, medical personnel, and lack of interest from the community in participating in the public health sector. The law justifies these guiding principles through the cost-effectiveness argument, working toward equity, efficiency, and integration (See Chapter 1). This same reasoning is apparent throughout *90-90-90*, which argues that effectively treating a large portion of the population for HIV will save HIV/AIDS-related healthcare costs in the

future. The cost-effectiveness method justifies the proposals of both Law 42-01 and the *90-90-90* targets. In this sense, both are well aligned in the rationalization of their proposals.

The General Health Law also addresses issues of discrimination and marginalization through the citation of international laws. It creates priority groups that the state is responsible for supporting: those below the poverty line, women, children under 14, the elderly, and the disabled. Article 28 defines an individual's health rights, guaranteeing nondiscrimination on the basis of "…ethnicity, age, religion, social status, political views, gender, legal status, economic status, or physical, intellectual, sensory or any other limitations" (National Congress 2001). This is a particularly important piece to PLWH, as it guarantees many of the marginalized groups disproportionately affected by HIV/AIDS will receive care in public clinics.

The most important aspect of this law was the creation of the National Health System, to be monitored, managed, and maintained by the Ministry of Public Health and Social Welfare (SESPAS). The National Council of Health was also created to be a "…space for consultation and advice on the formulation of health policy, monitoring…[its] implementation and evaluation…" (National Congress 2001). It is made up of representatives from the other ministries (education, agriculture, etc.), NGOs, and relevant health professionals. By placing responsibility on specific bodies to promote the National Health System, the General Health Law places some legal accountability on the state, as their main purpose is to monitor the law's implementation. This measure of accountability is extremely important for the realization of the law and may provide insight into how effectively the country will enact it. SESPAS has the responsibility to "…ensure compliance with international treaties and conventions related to health" (National Congress 2001, Article 14). By default, then, SESPAS is responsible for striving toward the completion of the *90-90-90* targets throughout the Dominican Republic.

The DHS surveys from the Dominican Republic address the difficulty in achieving universal access to healthcare (CESDEM and ICF International 2014). Although 15 years have passed since the creation of the new health law, there is still room for progress throughout the country in expanding healthcare coverage and ensuring that those on the subsidized regime are receiving free care at public clinics. SESPAS and the National Health Council continue to work toward the "health as a human right" ideal. However, according to Stephanie Leventhal, author of *A Gap Between Ideals and Reality*:

> Hospitals are not providing free care to the poor and uninsured, despite being required by law to do so; employers are not complying with social security and labor laws, which require them to provide health insurance even to undocumented workers; and no institution is holding either one accountable for lack of compliance. (Leventhal 2013, 1258)

The General Health Law, if it becomes more strictly enforced, is an important component for helping to realize the *90-90-90* plan. The plan emphasizes the role of human rights in HIV testing and treatment, just as the General Health Law does. In defining health as multifaceted set of factors (psychological, biological, social, cultural, etc.), Law 42-01 encompasses the biosocial aspects that are crucial to recognize in the treatment and care of PLWH. However, due to its slow progress in expanding coverage and the lenient enforcement of the law, it is unlikely that the healthcare sector will be able to address the testing and treatment needs of all PLWH as prescribed by *90-90-90*.

3.3 National HIV Law (135-11)

In 2011, the government of the Dominican Republic ratified the National HIV Law 135-11 (National Congress 2011), replacing Law 55-93 from 1993 (Harvard Law, n.d.). The year 2011 proved to be an especially important time for HIV policy making: it also marked the year of the UN General Assembly Special Session (UNGASS) on HIV/AIDS (See Section 2.1).

During this Special Session, delegates created a new resolution on the Political Declaration on HIV/AIDS from 2006 (UN General Assembly 2011). Following the UN meeting, the government of the Dominican Republic realized certain aspects of their existent HIV law required revisions to better align with the new international norms regarding the prevention of HIV and treatment of PLWH.

The timing of the creation of the new National HIV Law has important implications about the government's handling of the HIV/AIDS epidemic in the Dominican Republic. On the one hand, Law 135-11 demonstrates the country's commitment to honoring and enforcing international laws and policies through their own legal system. The 2011 HIV law cites numerous international documents, such as the UDHR and the Convention on the Rights of the Child, and recognizes the essential role of international agencies and NGOs in combating the epidemic (National Congress 2011). Because international law is only made enforceable through national courts and legal systems, Law 135-11 shows the Dominican Republic's full commitment to upholding its international obligations regarding HIV/AIDS. On the other hand, because the Caribbean hosts the second highest regional prevalence of HIV in the world, it is likely that policy makers and activists turned to leaders in these countries to enact change and further push an agenda to combat the epidemic.

As explained in Chapter 1, much of the world looks to cost-effectiveness as a means to justify or measure the success or failure of a particular intervention or change in public health expenditures. The National HIV Law of 2011 is wholly reflective of this: the law frames the epidemic as a burden on young people who could otherwise be working (National Congress 2011). This loss in the labor force then leads to a decrease in economic productivity of the state. The state must then utilize additional resources to provide healthcare for PLWH that are unable

to work. In this sense, the National HIV Law provides solid support for the cost-effectiveness argument. The law proposes that by providing preventative measures and treatment for PLWH, there will be a more productive labor force.

The National HIV Law 135-11 begins by recognizing some essential aspects of the epidemic, both within the Dominican Republic and globally. It explicitly notes the multifaceted nature of the disease and the need for comprehensive care[22] in treating PLWH. The law observes that they face more psychological, economic, and legal issues than someone who is not living with the virus (National Congress 2011). In an effort to relieve some of these issues for PLWH, the national government created this law to focus on anti-discrimination and fair treatment for PLWH throughout the country. The social, cultural, and ethical contexts in which the disease appears are also extremely important for response efforts and in many cases can be an "obstacle to development," according to this law (National Congress 2011, 1). It combines a social, legal, and ethical history with a biosocial lens and approach to the epidemic, which highlight the many factors that affect the way in which an epidemic arises and its future impact.

Additionally, the National HIV Law explicitly outlines the informed consent process for receiving a diagnostic HIV test. There are three exclusions for a voluntary HIV test: a court order for a particular individual who is suspected of a crime related to HIV, a donation of bodily tissue or fluids that could transmit HIV, and as a part of prenatal testing for pregnant women (National Congress 2011). If any of these groups test positive, it is the responsibility of the state to inform the individual and provide pre- and post-test counseling. If a woman is pregnant, they will

[22] The law defines "comprehensive care" (literal meaning "integral attention") as: "[A] Package of health promotion, prevention and care services, including psychological, legal, and social services, which are provided to a person in order to meet the needs that his condition requires" (National Congress 2011, 5).

receive treatment according to the state program for vertical transmission[23] reduction (National Congress 2011).

The law also places an emphasis on prevention because there is currently no cure for HIV. Specifically, the approach will be through education and availability of condoms throughout the country (National Congress 2011). The educational component outlined in Law 135-11 stresses the importance of teaching about stigma and discrimination in relation to PLWH, in addition to the biology of the retrovirus and how to prevent its spread (National Congress 2011). Public officials, including police, must be educated in HIV biosafety measures, in addition to HIV-related comprehensive care (National Congress 2011). Interestingly, and perhaps beneficially to the *90-90-90* targets, this educational component is also mandated in workplaces (National Congress 2011). The law also promotes condom use, requiring their availability in brothels and hotels in an effort to reduce the spread of the virus (National Congress 2011). An important note for the *90-90-90* targets, however, is the lack of the specific mention of ART, PrEP, and rectal and vaginal microbicides throughout this law. The *90-90-90* plan emphasizes treatment as prevention, which is utterly lacking throughout Law 135-11.

To achieve and enact the measures proposed in the National HIV Law, Article 21 creates the National Council for HIV/AIDS (CONAVIHSIDA). CONAVIHSIDA is a multi-sectorial and strategic organization stemming from the Ministry of Public Health and Social Assistance (SESPAS) that plans and coordinates the national response to the HIV epidemic, disperses related resources, promotes knowledge of the National HIV Law, and evaluates the impact and progress that the Dominican Republic has made in advancing international laws and policies related to HIV (National Congress 2011). The organization is made up of representatives from

[23] Passing from mother to child.

different public and private sectors, including businesses and non-profits doing work related to PLWH and representatives from the LGBT* community. Article 25 mandates that CONAVIHSIDA meet three times a year, and more if deemed necessary. The president of the Dominican Republic chooses the Executive Director of CONAVIHSIDA, who must have at least four years of prior work experience relating to PLWH (National Congress 2011).

The National HIV Law 135-11 provides a legal basis for non-discrimination against PLWH. It is a source for PLWH to turn to if they suspect their rights as someone living with HIV have been violated. In this sense, the National HIV Law is essential in setting a national precedent for the end of stigmatization of HIV in the eyes of the law. The *90-90-90* plan emphasizes the importance of removing legal and political barriers to healthcare access for PLWH to achieve the targets. Combined, the Social Security Law, General Health Law, and National HIV Law create a legal basis for the care of PLWH. However, in practice, the Social Security Law (Section 3.1) and the General Health Law (Section 3.2) are not enforced enough to achieve the *90-90-90* targets. Concerning levels of stigma related to HIV in the lay population of the Dominican Republic may also affect the realization of these national laws in smaller-scale clinical settings (Chapter 4).

3.4 Financing Antiretroviral Treatment in the Dominican Republic: National Scope

As discussed in Section 2.3, the Dominican Republic did not allocate funding to combating their HIV epidemic until 2013. Following expected decreases in international aid after 2012[24], the government created its first budget for ART. The government based this budget on epidemiological data and it included a financial surplus for supplies other than ART, such as

[24] In 2011, $6,410,000 USD of foreign aid allowed for 92% coverage in ART availability for the population. In 2012, the Dominican Republic received only $4,274,000 USD from international sources, which decreased adult ART availability to 75% (SIAPS 2015a).

those used for testing. This allocation also came with considerable changes in ART availability throughout the country: from 2013 to 2014 ART availability in healthcare centers increased from 73% to 92% (SIAPS 2015). The nearly 20% rise was possible because of the increased resource availability due to the surplus budget and the country switching their pharmaceutical supplier to purchase cheaper generic brands of ART. Switching suppliers decreased the cost of ART and allowed for a 25% increase in the amount of ART purchased (SIAPS 2014). In 2016, the government planned to increase the national budget for HIV by about four million USD to provide coverage based on the new WHO treatment guidelines (See Section 2.2) (SIAPS 2014). If ART availability stays at this level nationwide, the *90-90-90's* target to have 90% of PLWH on ART is wholly achievable for those that receive this subsidized treatment.

This shift in funding sources from international to national was an essential step for the HIV epidemic in the Dominican Republic. Through the creation of a national budget specifically allocated for the treatment of HIV in the country, the Dominican Republic took one of the first sustainable steps to eradicate the virus.

It is also important to note how the Dominican Republic came to prioritize the creation of a national HIV budget. Prior to 2013, the country faced recurring shortages of ART, prompting the government to seek more funding from the United States Agency for International Development (USAID). USAID, however, was reluctant to comply. Their studies showed that the Dominican Republic did not use the international aid money effectively and resources were distributed poorly. When the national government realized they would need to start budgeting for HIV prevention and treatment following the loss of international funding in 2012, an analysis was quickly conducted to evaluate the efficacy and efficiency of funding usage. Through the close monitoring of medical supply distribution and shortages, in addition to localized epidemics,

the Dominican Republic was able to quickly create an effective and successfully calculated budget (SIAPS 2014).

3.5 National HIV Updates and Reports

In 2008, COPRESIDA (the Presidential AIDS Council, a body of CONAVIHSIDA) published a report entitled *Tracking and Monitoring Implementation of the UNGASS Declaration on HIV/AIDS*. The purpose of the report was to demonstrate progress made in terms of the 2006 UNGASS on HIV/AIDS, which produced the Political Declaration on HIV/AIDS (UN General Assembly 2006). COPRESIDA reports a 0.8% HIV prevalence in the population in ages 15-49, while addressing the fact that certain populations in the Dominican Republic are more vulnerable to HIV, such as those living in the *bateyes*, the LGBT* community, sex workers, and women. An estimated 4,000 deaths were attributed to HIV/AIDS in the Dominican Republic in 2008 (Rathe and González 2008).

The report uses indicators of improvement based on prevention, treatment and attention, changes in knowledge and behavior, and mitigation of impact on HIV in the population (Rathe and González 2008). This data correspond to the indicators of MDG 6, as the report explicitly states the ultimate goals of reversing and halting the spread of HIV by 2015. While the report shows the commitment of the Dominican Republic to its international treaties and norms, it must also be noted that the government used no national funding for ART at the time. In 2007, only 29.1% of adults living with HIV were on ART. From this low percentage of coverage, it could easily be predicted that the country would not achieve the goals set forth by MDG 6 by 2015. What little national resources available went largely to prevention efforts prior to the creation of the national budget for combating HIV.

The most recent progress report available from the Dominican Republic was published in 2014 as a "…Continuation of the UN's Political Declaration on HIV/AIDS…" from the UNGASS on HIV/AIDS of 2011. A great deal of effort by the government to create social progress in the realm of HIV/AIDS since that time may be due to the passing of the National HIV Law in 2011. In 2013, CONAVIHSIDA hosted the first National Dialogue on HIV and the Law, where PLWH and the government discussed issues of discrimination, quality of care, and access to education (Dominican Republic 2014). Additionally, the report emphasizes the work done to further Law 135-11, especially in regards to combating discrimination against PLWH and providing education about HIV in the workplace (Dominican Republic 2014).

Based upon the national HIV epidemic as presented in this and the previous chapters, it is unlikely that the *90-90-90* targets will be achieved in the Dominican Republic. Although a progressive universal healthcare policy plan is in place in the country, there are too many barriers to overcome throughout the HIV healthcare continuum for the plan to be achieved by 2020. A humanitarian approach to healthcare policy by the government does not necessarily translate to progressive social attitudes or social change. These barriers include the social and historical contexts of both the Dominican Republic and HIV/AIDS, cultural differences between the Dominicans and Haitians (further discussed in Chapter 4), and the lack of enforcement of the Social Security Law, the General Health Law, and the National HIV Law.

Predictions about the Dominican Republic may also help provide insight into the broader social, historical, and cultural aspects that affect the achievement of the *90-90-90* targets in places with similarly characterized epidemics. Institutional deficiencies in enforcing these laws and expanding access to care point to the importance of strengthening governmental and public

health infrastructure within countries that prioritize human rights. Due to the Dominican Republic's previously weak public health infrastructure and its reliance on NGOs and international sources to combat HIV, it is just now beginning to treat the HIV epidemic through national means. Many other countries have followed this trajectory in HIV prevention and treatment policy and planning. At the same time, transferring a model that works for the Dominican Republic may not be the solution for another country because every national HIV epidemic is unique.

Chapter 4 Factors Affecting Implementation at the Local Level

The most important indicator for the achievement of the *90-90-90* plan is not international or national health policy, but rather the day-to-day implementation of these policies at the local level. Implementation is contingent upon numerous factors, such as access to quality care and the influence of stigma. Additionally, to better inform policies and practices, it is necessary for epidemiological and medical data to be readily available to healthcare providers and public health officials[25].

This chapter will explore how both international and national health policies are manifested at a local level, through the work of public health clinics and NGOs. Local implementation of these policies is where the cultural and historical contexts of the country and the HIV epidemic emerge. The key factors that will determine the likelihood of the *90-90-90* plan's achievement include stigma as a barrier to access, the availability and accessibility of ART, and overall inequities within the healthcare system. This chapter will consist of a stigma assessment and will review a number of HIV-related studies conducted in the Dominican Republic to assess the likelihood of the *90-90-90* targets coming to fruition. In combination, these studies are a key to understanding the different layers of stigma that affect each marginalized group disproportionately affected by HIV. The studies include those related to availability and quality of HIV testing and counseling, barriers to healthcare access, and medication adherence. These factors will all be of chief importance to the success of the *90-90-90* plan.

[25] Doctors, researchers, and the government collect this information routinely as they interact with PLWH. Because the national government of the Dominican Republic has only recently started to collect this data, the country will be at a disadvantage compared to those that have been tracking their data since the beginning of the pandemic (SIAPS 2014). However, the effective use of this information will be key to identifying areas of care and treatment in which the country must improve its outreach to PLWH.

4.1 The Origin and Impact of Stigma Related to HIV/AIDS

As explained in Chapter 1, the first cases of AIDS were reported in the United States in 1981 and were identified in a group of young gay men. The population in which the first cases appeared subsequently set the tone for the emerging outbreak. According to many people at the time, these young men "deserved" this disease as a punishment for their "sinful" actions. For two years prior to 1983, when Robert Gallo first identified the retrovirus that causes HIV, cases of AIDS were associated with the four H's: homosexuals, hemophiliacs, heroin users, and Haitians. These groups were characterized as at risk of transmitting HIV/AIDS to others (Gallo 2006). The conceptualization of the four H's further reinforced the divide between the "guilty" or "sinful" groups and those that were "innocent," helping to conceive the moralistic framework in which the disease was shaped. Hemophiliacs were included in the "innocent" category, as exemplified by the young Ryan White in the United States[26]. This category also included HIV-positive babies, stemming from vertical transmission of the virus (Kazanjian 2014).

To understand how and when Haitians became a risk group associated with HIV, it is necessary to explore the disease's origins, which date back to the 1920s. Current research and data suggest that the HIV virus originated from monkeys on the African continent who carry a close relative of HIV: the Simian immunodeficiency virus (SIV). The most widely accepted theory of how the virus spread from monkeys to humans is the "hunter" theory, which holds that due to the killing and consumption of monkeys, in addition to unintentional spread of the

[26] Ryan White was an HIV-positive child from Indiana. He was a hemophiliac and became infected through a blood transfusion. When other parents at his school found out that he was infected with the virus, they lobbied to have Ryan expelled (Kazanjian 2014). However, Ryan wanted to go to school and his family fought for him to be able to attend. At the time, this was a difficult battle because of the groups that HIV/AIDS had come to be associated with. Ryan's mother, Jeanne White Ginder, recalls how most believed that Ryan had to be homosexual or involved in sexual activity with other men in order to have the virus (Ginder, n.d.).

monkey's blood into human wounds, zoonosis of the virus occurred. Early HIV transmission data suggests that the first cases occurred in the 1920s in the Democratic Republic of Congo. In the 1960s, the HIV virus appeared in Haiti, following the return of professional Haitians that worked in the Democratic Republic of Congo (AVERT 2015a). The U.S. identified the first cases of HIV/AIDS in 1981. By 1982 the Center for Disease Control (CDC) began to identify Haitians as a "risk group," as they monitored the health of incoming immigrants to the United States (CDC 1982).

4.1.1 Defining and Measuring Stigma

The historical context of HIV has manifested itself in stigma associated with both the "typical" person infected and the disease itself. To better understand this stigma, first we must define it. According to Zulliger et al. stigma, in relation to HIV, is "a social process that reinforces differences and perpetuates existent inequities" (Zulliger et al. 2015). Because HIV largely affects marginalized groups, many of those infected with the virus face a sort of double-, triple-, and quadruple-burdens due to the combination of their social and medical statuses. For example, a female sex worker may face stigma due to her job in the sex industry, being HIV positive, and being a woman. These three layers of stigmatized social and disease identities demonstrate the complexities of being an HIV positive person within a marginalized group or community.

To quantify a measurement of stigma in the Dominican Republic, the People Living with HIV Stigma Index study was conducted in 2008. This project launched in an effort to create policy recommendations based on findings of HIV-related stigma in different countries. The Dominican Republic was the first country to pilot this project. PLWH implement and conduct the HIV Stigma Index themselves in a form of community based research. As an added benefit,

this approach facilitated self-empowerment and allowed those conducting the research to develop marketable skills that they otherwise might not have had the opportunity to gain. The HIV Stigma Index is perhaps the best measurement of stigma available for the Dominican Republic due to its breadth and in-depth nature. Questions were specific to local communities and addressed many aspects related to socioeconomic status (The People Living with HIV Stigma Index 2008).

The study included interviews with 1,000 PLWH throughout the country, with about equal numbers of males and females[27]. It finds that the kinds of discrimination most commonly reported by PLWH are gossip (62.3%), verbal harassment and threats (26.8%), and physical harassment and threats (13.8%). PLWH also commonly felt rejected due to the perceptions that others have about HIV (Ureña 2009). For those PLWH that felt rejected due to others' perceptions about HIV, accessing testing and treatment services may be even more challenging. They may fear disclosing their status to others leading to feelings of isolation. They may also be more reluctant to seek testing and treatment services in fear of rejection and judgment by medical personnel (Simmons 2010) or their status being disclosed.

An important overall finding of the HIV Stigma Index is the general lack of awareness among PLWH of the laws that guarantee them rights and ban discrimination based on their disease status. Less than half of respondents had heard of the Universal Declaration on HIV/AIDS and only slightly more than half knew of the national AIDS law (at the time, Law 55-93). Of the respondents, 23.1% had faced violations of rights due to their HIV status in the areas of employment, housing, and access to healthcare services[28]. This everyday discrimination exemplifies how important it is for HIV-positive individuals to have an understanding of the

[27] 0.4% of the participants identified as transsexual (Ureña 2009).
[28] Only 10% of this percentage "sought legal compensation" for these offenses (Ureña 2009).

rights guaranteed to them as PLWH. Without this knowledge, they do not have enough information to enforce their rights as an HIV-positive person under the law (Ureña 2009)[29].

In addition to information collected through the HIV Stigma Index, the Demographic and Health Surveys (DHS) of the Dominican Republic evaluate attitudes toward HIV/AIDS, which I will consider to be a measure of stigma for the purpose of this thesis. Overall perceptions are based on four questions related to HIV/AIDS in daily life and interactions, which include: (1) openness to caring for a relative with AIDS in the home, (2) buying fresh vegetables from a vendor with AIDS, (3) belief that a teacher that has AIDS should be permitted to keep teaching, and finally (4) not wanting to keep the HIV-positive status of a family member a secret (CESDEM and ICF International 2014, CESDEM and ICF International 2015). This questionnaire is based on another survey developed by WHO, but expands to "reflect situations in which PLWH actually suffer from stigma." Both DHS data sets available, for the country and the *bateyes*, include the same questions. Table 4.1 and Figure 4.1 show the percentages of accepting attitudes weighted for the total people living in *bateyes* and the country, comparing the two. Total acceptance is a calculation of the number of respondents that express accepting attitudes toward *all four* questions divided by the total number of respondents that had heard of HIV/AIDS (The DHS Program, n.d.).

[29] Analysis of the People Living with HIV Stigma Index shows that PLWH in the Dominican Republic have a lower socioeconomic status than the average of the country and lower educational levels (Ureña 2009).

Table 4.1 – Average Accepting Attitudes Toward PLWH

	Question 1 (Caring for relatives)	Question 2 (Buying veggies)	Question 3 (Teacher)	Question 4 (Secrecy)	Total Acceptance
Dominican Republic	88.9%	47.7%	69%	59.7%	22.68%
Bateyes	85.4%	44.2%	64%	62.7%	22.54%

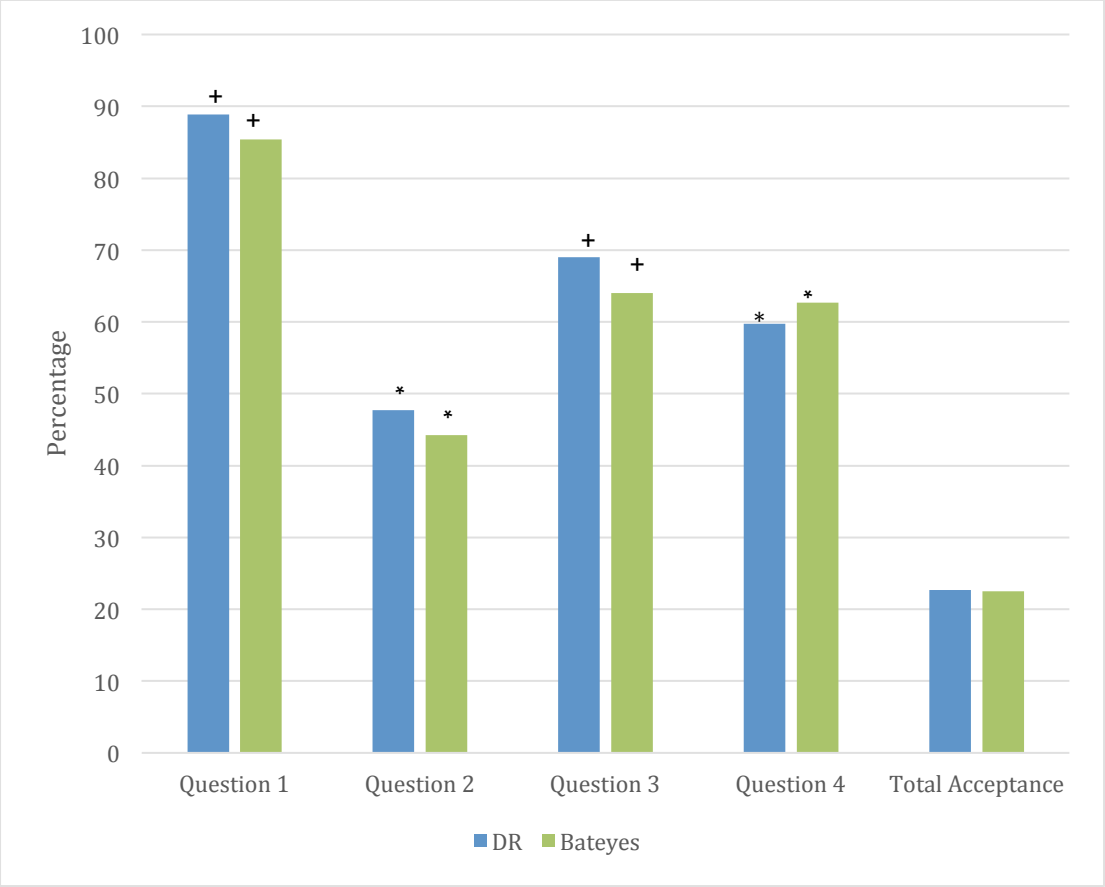

Figure 4.1 – Average Accepting Attitudes Toward PLWH[30]

Figure 2.1 shows that responses to each of the questions were statistically significant between the *bateyes* and the Dominican Republic. *However*, in comparing the percentage of total

[30] Paired T-test. P*<0.05, P+<0.01.

acceptance, *there is no statistical significance between the two populations*. This is surprising. The DHS report for the Dominican Republic indicates that "the most notable finding is the direct relationship between the total acceptance, educational level, and socioeconomic status" (CESDEM 2014, 253). Because *bateyes* are generally made up of Haitians of lower socioeconomic status (Bernier 2003), one would expect that this population would have a comparatively lower total acceptance toward HIV/AIDS. This unexpected finding revealed by my study may mean that although stigma is still prevalent throughout the *bateyes*, socioeconomic status has a weaker relationship with accepting attitudes toward HIV/AIDS in those communities. In this sense, stigma may be less of a barrier to access to care and treatment for those living in the *bateyes*. This hypothesis merits further study.

The People Living with HIV Stigma Index and the DHS data provide two sets of information that together may help to inform how stigma will affect the outcome of the *90-90-90* plan. The Stigma Index provides policy makers with a good sense, or at least a starting point to understand, the types of discrimination against PLWH that are the most common in the Dominican Republic. The associated stigmas may then be used to further educational efforts and to provide useful information for the implementation of local and national HIV treatment programs. However, the DHS data shows a concerning level of stigma toward HIV in the Dominican Republic. For this reason, the *90-90-90* targets will be difficult to achieve in the Dominican Republic without a concentrated and enforced effort in educational outreach to combat HIV-related stigma.

4.1.2 Sex Workers, Intravenous Drug Users (IVDUs), Men Who Have Sex with Men (MSM), and Women

Based on current literature, a large portion of HIV-related community outreach programs and research is done with the population of female sex workers (FSWs) on the island. Today, the Dominican Republic has an economy that is largely based upon the global tourism industry

(Cohen 2006). Sex work is legal in the country, making it a popular location for sex tourism (AIDSinfo 2014). However, sex workers also work outside resort areas and many develop local client bases (Cohen 2006).

According to the *National Report on the Advances in the Response to AIDS: Continuation of the Political Declaration of the United Nations on HIV/AIDS* of 2014, 85.06% of sex workers used a condom with their last client (Dominican Republic 2014, 23)[31]. Although these numbers are high, for the *90-90-90* plan to succeed it is crucial that every sex worker uses a condom with every client as they are a group that is disproportionately affected by HIV, and as a group they have a relatively high frequency of sexual encounters. Reducing risk behaviors in this population is essential to slowing and eventually stopping the spread of the virus.

Although it is not well documented in terms of substance abuse within the population, the Dominican Republic has become increasingly involved in the drug trade in recent years (Rojas et al. 2011). The Dominican Republic's MDG report of 2013 cites an 8% prevalence of HIV among IVDUs throughout the country in 2008 (Ministerio de Economía Panificación y Desarrollo 2014, 83). However, Rojas et al. note that except for alcohol, drug use is reported to be very low in the Dominican Republic (Rojas et al. 2011, 10). They also state that intravenous drug use is relatively uncommon and, unlike other countries where IVDUs are at a heightened risk for contracting HIV, intravenous drug use is not considered a risk factor for HIV in the Dominican Republic (Rojas et al. 2011, 10-11). It is likely, however, that the use of other drugs that increase risk behaviors associated with contracting HIV are underreported (Rojas et al. 2011, 311). The

[31] Similarly, according to the DHS reports available for the Dominican Republic in 2013, an average of 95.35% of women and 95.4% of men between the ages of 15 and 49 would ask to use a condom if they knew that their sexual partner had a sexually transmitted infection (STI) (CESDEM and ICF International 2013, 257). Additionally, 88.55% of men and women between the ages of 18 and 49 believed that kids should learn how to use a condom to prevent AIDS (CESDEM and ICF International 2013, 258).

DHS surveys for the Dominican Republic show higher average drug usage among men (5.48%) than women (1.125%)[32] (CESDEM and ICF International 2014, 205). Data for IVDUs and HIV is lacking for the Dominican Republic. To better understand the epidemic in this population, the country must establish ways of collecting data on safe needle and sexual practices to reconcile the data in the MDG report 2013 and Rojas et al.

Regarding the MSM population, the stigma associated with being gay and HIV-positive remains widespread, especially in Latin America. Cultural norms such as *machismo* and a strong association with the Catholic Church in many countries create an unwelcoming and hostile environment for men who identify as gay (AVERT 2015b). Additionally, the idea that sexual orientation can be "fixed" is still prevalent in many communities, and MSM may face discrimination that is not prevented by law (Anti-Gay Views Rampant in Dominican Republic 2014). Rojas et al. reports that in 2008, the MSM population had the second highest prevalence of HIV after *bateyes*. Additionally, due to the stigmatization of homosexuality throughout the Dominican Republic, MSM will be less likely to seek testing and treatment for HIV (Rojas et al. 2011, 309). It is crucial that the country address the need for testing, counseling and HIV-related care in the MSM population for the *90-90-90* targets to be achieved.

Regarding women, HIV transmission in the Dominican Republic occurs primarily through heterosexual sex and women are particularly vulnerable to HIV infection due to a host of cultural factors (Rojas et al. 2011). In 2004, prior to the major healthcare reform, reports from the Human Rights Watch indicated that women were tested for HIV in health clinics in the Dominican Republic without their knowledge, and therefore without consent (Human Rights Watch 2004). If results came back positive, they faced multiple levels of discrimination,

[32] These numbers are the percentage of people who have used drugs "once or twice" (CESDEM and ICF International 2014, 205).

including losing their jobs and facing difficulties accessing HIV-related healthcare (Human Rights Watch 2004)[33].

The Dominican Republic has had a strong vertical transmission reduction program and cases of HIV among pregnant women have gone down since 1999 (Rojas et al. 2011, 309). As mandated by the National HIV Law, all pregnant women that present themselves for care at a public clinic are to be tested for HIV (National Congress 2011). While this policy has been a notable success, many people view newborns that are HIV-positive as an "innocent" category of PLWH, similar to hemophiliacs. Newborns are free of the stigma that adults who contract the virus may face. This vertical transmission intervention is an example of successful and effective campaigning to reduce the spread of HIV.

4.1.3 Haitians

Another major population in the Dominican Republic at heightened risk of contracting HIV is Haitians. Haitians consistently face discrimination in the Dominican Republic based on their race and perceived immigration status, which then manifest in barriers to accessing healthcare (Simmons 2010). Their risk increases if they do not speak Spanish since few HIV programs in the country specifically target at-risk Haitian groups in their native language (Rojas et al. 2011). This group is less likely to seek medical attention, especially through public clinics, which may be the only affordable healthcare option. Although the healthcare law mandates that all people be granted access to healthcare, solely Creole-speaking Haitians are more likely to be unaware of this law and thus less likely to seek treatment (PIH 2013). This lack of awareness holds true for the National HIV Law, which would allow Haitians living with HIV to bring any discriminatory practices to the attention of national courts in the Dominican Republic.

[33] Rojas et al. report that in 2007, 87% of women had difficulty in accessing healthcare (Rojas et al. 2011).

Haitians represent the marginalized group that is the most disproportionately affected by HIV/AIDS in the Dominican Republic. The best explanation of the stigma associated with Haitians living with HIV that I have read comes from Dr. Alexander Widner of Partners in Health (PIH):

> About 45 percent of our patients are Haitian migrants, many of whom live in the DR without documents. They have four strikes against them. First, they are migrants who don't speak the language or know the culture of the DR. Second, they don't have legal immigration documentation. Third, they are living with HIV. Finally, they're Haitian, and face discrimination and racism (PIH 2013).

For the *90-90-90* targets to succeed throughout the country, it is crucial that healthcare access extend to migrant Haitian workers. Testing, counseling, and treatment services for this population should be available at public clinics free of charge based on current domestic healthcare laws and policies. It would even be advisable to have Creole-speaking health workers go into *bateyes* to conduct tests and deliver treatment for PLWH. However, Haitians face continual discrimination in medical settings (Simmons 2010) and are unable to access these free services as promised by the Dominican government (Leventhal 2013). If the goals of universal and equitable access to healthcare are to be met in the country, the health disparities of Haitians living in *bateyes* must be addressed.

4.2 Other Risk Factors Affecting the Achievement of *90-90-90* in the Dominican Republic

Culture is another component that greatly influences HIV-related care and can help to better inform the likely barriers to treatment within a community. Although culture is highly variable and many practices and beliefs may not be uniform throughout a population, recent literature has proposed certain "cultural norms" that appear time and again in many of these marginalized populations. In the Dominican Republic, some of these social and cultural risk factors for HIV transmission include "…early sexual debut, high rate of adolescent pregnancy, and the stigma of

homosexuality, anal sex, and the lack of condom use" (Rojas et al. 2011, 306). All of these risk factors are important components to address in the context of the country's epidemic.

As explained in Chapter 1 (Introduction), for the *90-90-90* target of achieving suppressed viral loads, those on ART must take their medication regimen consistently. In 2014, a study conducted out of Clínica de Familia La Romana found that in resource-limited settings, such as the Dominican Republic, adherence proves to be a major challenge (Winter at al. 2014). Following the increase in government spending on ART and thus its increased availability in 2013, the challenge of adherence is becoming a part of HIV counseling and treatment that will need to be strengthened in the Dominican Republic in order for the *90-90-90* plan to be achieved.

Harris et al. found that common risk factors for non-adherence in the Dominican Republic include heavy alcohol consumption, parental status, and the perception of less social support related to adherence (Harris et al. 2011). Although most drug use is highly stigmatized in the country, alcohol use is extremely common and is a huge component of social life for many Dominicans, especially men (Harris et al. 2011). Alcohol can be a risk factor for contracting or spreading the virus and to non-adherence. Additionally, having children is a risk factor for non-adherence among PLWH living in the Dominican Republic. This challenge may be due to a competition of household resources and supplies for children such as food (Harris et al. 2011).

Although this section does not include all social or cultural risk factors for contracting HIV, it serves to inform readers of possible barriers to achieving the *90-90-90* plan in the Dominican Republic. These barriers will be important to address if the government begins to actively implement and strive toward the targets set forth by *90-90-90*.

4.3 The Role of Non-Governmental Organizations

Historically, NGOs have played a crucial role in the Dominican Republic's HIV/AIDS epidemic. As discussed in Chapters 2 and 3, prior to 2012 the government of the Dominican Republic placed no money or resources into the funding of ART (SIAPS 2014). NGOs provide a great resource for many PLWH that have not gotten the quality care they sought at public clinics. They therefore are an important source for the accomplishment of the *90-90-90* targets. Many are also inherently interlinked with human rights movements. This section provided a glimpse into the activities of some NGOs combatting HIV/AIDS in Hispaniola and the gaps they often fill in terms of access to care and treatment for many PLWH in the Dominican Republic.

Clínica de Familia La Romana is the second largest provider of ART to the southeastern portion of the Dominican Republic (UT Health Science Center School of Medicine 2012). They work closely with medical and public health students, many from the United States, who develop interventions to be executed in the clinic. As an example, in 2014 Winter et al. published a paper to evaluate an education-based HIV adherence program conducted through the clinic. In this study, adherence was measured through appointment visits and saw a "15-fold increase in CD4-count compared with a 2.5-fold increase in controls" (p. 361, Winter et al. 2014). This example shows that NGOs can be effective in helping to contribute to the goals of *90-90-90*.

Similarly, as explained in Section 4.1.1 (Defining and Measuring Stigma), the HIV Stigma Index found that many PLWH were unaware of the laws that protected their rights. Clínica de Familia La Romana has implemented programs to address these needs, particularly for HIV-positive youth (Clínica de Familia La Romana 2016). Their work empowers their clients, many of whom are Haitian, to know their legal rights as someone who is HIV positive.

Finally, it is perhaps impossible to talk about HIV on the island of Hispaniola without mentioning PIH. PIH was founded in 1987 and supports a few public health facilities in the Dominican Republic, along the border of Haiti (PIH 2013). As explained by Dr. Alexander Widner in Section 4.1.3 (Haitians), a great deal of the organization's patients are Haitian migrants, living in *bateyes* while they work (PIH 2013). Most of PIH's work is concentrated in Haiti, but its influence and impact has spilled over to the Dominican Republic. PIH's program in the Dominican Republic has the goal of strengthening their healthcare system, while training community health workers to provide treatment and support for PLWH in border towns (PIH 2011).

Haitian immigrants and migrants, sex workers, men who have sex with men, women, and those below the poverty line diagnosed with HIV face further discrimination and stigmatization not only from their diagnosis, but from their social identities and occupations. While recent health system reforms in the Dominican Republic promise equitable access to care and treatment for these marginalized groups, discrimination continues to deter those most at risk for contracting HIV from seeking testing, counseling, and treatment from public hospitals and clinics. To ensure that those diagnosed are getting the treatment they need as prescribed by *90-90-90*, education and public health measures must be strengthened, in addition to increased spending by the state on health for those who cannot afford it. NGOs can be an important resource, but only governmental actors have sufficient scale to achieve these goals – if the political will can be found.

Chapter 5 Conclusion

In light of the evidence presented by this thesis, it is unlikely that the Dominican Republic will be able to achieve the goals set forth by *90-90-90*. Although progress has been made in terms of policy and ART availability since the turn of the millennium, the country still has a lot of work to do to halt the HIV epidemic within its borders. Based on current national policy surrounding HIV/AIDS, it is evident that the Dominican Republic prioritizes and takes seriously any international agreements they sign. However, progress in terms of action tends to be slow and the country has yet to achieve its goal of universal access to healthcare. While the prevalence of HIV has gone down in some of the more at-risk communities, there is still plenty of work to be done to completely eradicate the virus as proposed by the *90-90-90* plan.

5.1 International Goals

The *90-90-90* targets demonstrate the international community's continual commitment to work toward ending the HIV pandemic. Yet, because international norms and policy surrounding HIV can only be enforceable through national legal systems, states are responsible for choosing which policies to adopt and in what ways they will be enforced. For this reason, there is little uniformity in the adoption of global HIV policies. National governments continue to work for their own best interest. In this case study of the Dominican Republic, for instance, some members of Dominican society are explicitly excluded from receiving access to healthcare even though public health services are supposed to be free for all people in the country. Those excluded also happen to be populations that are disproportionately affected by HIV, most specifically Haitians.

The UN has ensured some level of accountability from states, as they conduct and ask national governments to give periodical updates on issues of international concern. In the case of

HIV/AIDS, it would be advisable to create a more streamlined system for international plans to end the epidemic, in addition to more streamlined national reporting. Although decreases in prevalence have occurred throughout much of the world, the populations that are continually mentioned in international reports on HIV show only slow, and sometimes stagnated or reversed, improvement (Dominican Republic 2014).

Two major concerns arise regarding these international goals for ending HIV/AIDS. Firstly, the world has not achieved any of the HIV/AIDS related goals in the past 16 years. MDG 6 was not achieved by 2015, yet UNAIDS created another achievement target for an extended timeframe (*90-90-90*). While it is beneficial to have international goals in place, the continual goal has been to "halt" or "end" the AIDS epidemic by a certain year. This pandemic is not that simple. Setting sights and expectations high can be good motivation, but there are many other global issues besides HIV/AIDS that demand attention. Efforts moving forward with these goals should be as effective as possible in the least amount of time and international bodies should set measureable and realistic goals. High-risk social and sexual behaviors associated with HIV transmission make the disease difficult to eradicate. Secondly, there may be a disconnect between policy makers at the international and national levels and medical and healthcare professionals working in the field. These goals seem feasible for someone that has never worked with the PLWH population first hand and does not have to take personal responsibility for seeing the goals through.

From June 8 to 10, 2016, the United Nations will host a High-Level Meeting on Ending AIDS, where they will address the challenges and try to move forward in ending the AIDS epidemic by 2030 (UN General Assembly 2015). Based on previous work done and legislation passed in the Dominican Republic, the country may expect to see some newer policy

developments in regards to HIV/AIDS in the coming years. However, it is unrealistic to expect widespread change in voluntary testing practices and ART access as a result of these policies throughout the Dominican Republic. For the past three years, the country has debated including ART on their public health insurance plan (SIAPS 2015b). This demonstrates the slow pace at which many of the policies surrounding HIV/AIDS are enacted, if they are at all.

While it is important to set goals for achieving optimal health for the globe, it is equally important that these goals remain realistic. The HIV pandemic is extremely unevenly distributed and affects many marginalized populations disproportionately. For this reason, it is justifiable that goals set forth by international bodies are no longer so generalized. They should address specific factors of the disease in addition to outlining the specifics of interventions for different populations. I therefore propose that in the future, HIV-related international goals be set with locally and regionally specific targets and funding is immediately allocated to the goal.

In every public health intervention and policy, those involved in its creation must address whether the intervention or policy is scalable and transferable. For a policy or intervention to be scalable and transferable, it must be widely applied and effective to most, if not all, populations throughout the world. However, this can be difficult to achieve. In the case of HIV/AIDS it may be impossible. Tacking on HIV/AIDS-related international goals to MDGs and SDGs may not be the solution for these epidemics. As Jim Kim, president of the World Bank, points out:

> We cannot simply identify a policy measure, chart the duration of its implementation within a country, and then, observing changes in health and social indicators through time, deduce the effects of the policy on the poor. The causal relationships at work are vastly more complicated. (Kim et al. 2000, 8)

This quote exemplifies exactly what the MDG reports have done. A goal is set forth, the international community works toward a multitude of targets and tracks progress through the

years. However, we have no data as of yet, to demonstrate if these goals are the most effective and efficient way to decrease inequities and increase wellbeing throughout the world.

5.2 *90-90-90* and the Dominican Republic

Many factors will discourage Dominicans, especially those belonging to the most at-risk groups, from seeking testing for HIV. These include stigma and discrimination, language barriers for Haitians, having to pay out-of-pocket costs and not knowing where to get tested. Although testing rates are fairly high throughout Latin America and the Caribbean at 70% (UNAIDS 2014), accessing treatment and maintaining treatment regimens may prove to be the most challenging targets for achieving *90-90-90*. For everyone to receive ART per the global WHO guidelines the government of the Dominican Republic must either lessen the cost of ART for the uninsured or enforce their universal healthcare coverage laws. They must also increase the allocated budget to cover ART based on these guidelines.

The government of the Dominican Republic has put forth a great effort in tracking and monitoring their HIV epidemic, especially after the ratification of the National HIV Law in 2011. This effort points to a first step in sustainable change in combating the epidemic. However, the 9*0-90-90* plan has only a short window of five years in which to achieve its three major targets. While this may mean the country will see long-term improvements in the HIV epidemic, it is unlikely these improvements will be enough to meet the *90-90-90* targets in those five years.

The adoptions of accepting attitudes, equitable access to care and quality treatment for HIV are the most important factors to achieving the *90-90-90* targets at the ground level. Because HIV disproportionately affects already socially marginalized groups and communities, it is pertinent that these groups are specifically addressed at the national policy level to ensure testing and treatment can reach these populations. Haitians, IVDUs, sex workers, MSM and

women all face additional barriers to access along the HIV care continuum (Rojas et al. 2011). Although these groups are all included in the General Health Law, its slow progress and lack of thorough enforcement have led to disparities in healthcare and insurance coverage in marginalized populations.

While experts continue to search for a cure for HIV/AIDS, intervention efforts should be focused on specific marginalized groups and communities at higher risks for contracting the virus. In the Dominican Republic, this would mean expanding healthcare coverage to Haitians living in their borders, regardless of citizenship status. All people must have access to free and equitable healthcare, as domestic laws mandate, for the achievement of *90-90-90* in the Dominican Republic. Testing and treatment services need to be available for everyone and free of cost. Because international and national policies are not strictly enforced, the *90-90-90* targets will not be achieved in the Dominican Republic.

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