**A Cultural Analysis of HIV/AIDS in Mexico**

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**Introduction**

Many patients in emergency situations go to Cruz Roja in Oaxaca. One of the members of our group was attending to a disoriented rape victim. She didn't know where she was, and she was struggling to break free of her IV and monitors, and he tried to restrain her and calm her down. She scratched his hand and cut him, she then pulled her IV out and blood poured all over his hands, including the fresh scratch. Cruz Roja had none of this patient's records or any indication of who she is. They did not have the resources to test her for HIV/AIDS or other diseases transmitted through the blood, and had no indication of our group member's risk for infection. Later, he was suturing a patient and blood squirted into his eye. He paid 250 pesos at a local laboratory to test for HIV/AIDS and the test came back negative. However the potential of one of our group members contracting the virus, the lack of patient records and resources to test the patient sparked our interest in the cultural perceptions of HIV/AIDS in Mexico, as well as its prevalence, screening and treatment.

The prevalence of HIV/AIDS is relatively low in Mexico as compared to the United States and other Latin American countries. Men who have sex with men, male and female sex workers, and injection drug users are considered at risk subgroups and are disproportionately affected (USAID Mexico, 2010). Many cultural and economic factors contribute to the high prevalence of AIDS in these populations. These factors present barriers to behavioral change and disease prevention within communities and include population mobility, homophobia, gender inequalities and various social stigmas. All of these factors prevent testing, treatment and preventative behavioral changes (USAID Mexico, 2010). There is very limited funding and resources for specialized HIV/AIDS screening and treatment and the various social factors that prevent individuals from seeking treatment create barriers to lowering the prevalence of HIV/AIDS. While an estimated 200,000 Mexicans lived with HIV/AIDS at the end of 2007, only 57% received antiretroviral therapy, presenting a critical public health crisis (USAID Mexico, 2010).

 HIV/AIDS can be detected through a blood test displaying a CD4 cell count below 200cells/mm3, and disease severity and control is monitored by measuring the HIV mRNA levels, or viral load in the blood. Current prevention strategies include sex education in schools, and required screening for sex workers. However, a lack of readily available resources and specialized HIV/AIDS care, and the social stigma associated with HIV/AIDS creates barriers in early detection and treatment. The Mexican government has created specialized care centers that screen and treat patients called *Centros Ambulatorios Para la Prevencion en SIDA y ITS* that are dedicated to combating the AIDS epidemic*.* However, HIV/AIDS patients face discrimination within families, the healthcare system, law enforcement, and the workplace, discouraging people from openly seeking screening and treatment (USAID Mexico, 2010). Limitations of *Seguro Popular* in distribution and availability of quality care also contributes to the proliferations of HIV/AIDS. Changes in cultural perceptions are needed as well as equality in healthcare access to reduce AIDS prevalence in Mexico.

 Immigration poses a large risk factor for AIDS in the Mexican population, as many men travel to work in the United States, engage in high risk sex, and later infect their wives after returning to Mexico. The culture of machismo encourages Mexican men to have sex without condoms and have sex with many partners without worrying about the risk of disease transmission. A lack of condom use, high levels of extra-relational sex, and a lack of perception of HIV/AIDS transmission risk present great risk factors in disease transmission. Gender inequalities make it difficult for women to ask their partners to use condoms, as they perceive such requests as accusations of infidelity. Women also face high levels of abuse at the hands of their partner, reducing their ability to negotiate safe sex practices (USAID Mexico, 2010).

 Conservative social norms create barriers to proper sex education, leaving many young people vulnerable to sexually transmitted diseases. Talking about sex is considered inappropriate and indecent, thus many schools do not teach the topic of sex education as they face opposition from students' parents. With better education, safe-sex habits would be more pervasive among youth, preventing large contributions to disease transmission.

 Traditional values also prevent proper disease screening and control, as patients may prefer to go to a curandera than a physician. Without antiretroviral therapy, disease consequences worsen, increasing morbidity and mortality associated with HIV/AIDS and its opportunistic infections.

 We hypothesize that current cultural and economic factors present barriers to proper HIV/AIDS prevention, screening, and care in Mexico, and that public health reforms and outreach programs which take cultural factors into account are needed to create perception and behavioral changes to lower HIV/AIDS prevalence in Mexico. This paper explores the disproportionate prevalence of HIV/AIDS in subgroups, social and cultural barriers to change, disparities in quality healthcare access, and potential reforms that can improve disease prevalence.

**Methods**

 Information was gathered regarding HIV/AIDS in Mexico with an emphasis, when possible, on those in the state of Oaxaca. These secondary sources, such as public health profiles of HIV/AIDS in Mexico, literature that reviews cultural factors, and the treatment and prevalence of HIV/AIDS in Mexico, are used in support of our findings. The most recent sources were gathered from various databases including, but not limited to, Google Scholar, the course reader and the electronic library of the University of California, Davis. Narratives are based on primary observations of HIV/AIDS patients in Oaxaca, Mexico at various locations including Hospital Civil, the Cruz Roja and Centros de Salud.

**Diagnosis**

Many social and economic barriers exist in Mexico that prevent individuals from receiving HIV screening and a timely diagnosis. A social stigma regarding the disease still exists in terms of homophobia and social class. Gender inequities also hamper the public’s response to outreach campaigns. These factors often dissuade individuals from seeking help and receiving a diagnosis. In Mexico, discrimination against individuals with HIV/AIDS continues to exist and may prevent individuals from getting a job or earning money for their family. It is common practice to dismiss AIDS victims in order to hold up the reputation of a community or to preserve the character of a family. Some individuals may live with the idea that they would rather not know if they have the disease so that they don’t encounter these difficulties. Also, many individuals are not fully informed about the AIDS virus and may not know that they should be screened. Sex education is often not taught in schools and many parents consider it taboo to talk about sex with their children. Some young adults or teenagers may find it difficult to go to a health center to get tested in fear of their parents or spouses finding out.

The symptoms of HIV vary depending on what stage the disease is in. The early, or acute, stage presents itself one to two months after the initial infection. Symptoms are usually mild, flu like and include headache, fever, muscle soreness, joint pain, diarrhea and night sweats. After these symptoms subside, the virus may evolve into a clinical latent infection and remain dormant in the body for 8 to 10 years. Typically, if the disease is not caught by this point, AIDS would have developed, meaning that severe damage had occurred to their immune system. Symptoms of AIDS include soaking night sweats, chronic diarrhea, fatigue, blurred vision, weight loss and rashes (Mayo clinic, 2011).

In Mexico, HIV and AIDS are diagnosed in a similar manner to the United States. The primary way to diagnose the HIV virus is to test for antibodies present in the blood stream; however, it may take anywhere from six weeks to a year for antibodies to present. The various tests available in Mexico are the enzyme-linked immunosorbent assay (ELISA), saliva, viral-load and western blot tests. These tests are free and can be done in any health center covered by Seguro Popular.

**Treatment**

There is currently no cure for HIV or AIDS; however, there are antiviral medications that help manage the disease and prolong life. The purpose of antiviral medication is to keep the amount of HIV in one’s system at a low level so that the body’s immune system can build up its defenses and recover from damage already done. The lethality of the AIDS virus is not due to the virus itself, but from outside attack and the body’s inability to fight off even the slightest infection.

Prior to the creation and implementation of Seguro Popular, uninsured individuals with HIV and AIDS often had a difficult time purchasing the expensive antivirals available to them. This greatly decreased the quality of life for these individuals as they had no way to combat the virus. The Seguro Popular system was created in 2003 in an attempt to cover the healthcare costs for the low income population and now provides access to these medications at little to no cost. In 2009, Seguro Popular provided financial support to 32,276 infected individuals and spent over 2 billion pesos on treatments (Aguilar, 2009). The estimated cost of treatment per individual is about $10,197.50 (USD) with about 86% of the cost attributed to antiviral medication (Saavedra, 1997). In spite of this, many individuals still do not receive adequate health care coverage. This program is largely funded by taxes and the Mexican government. If funds run low, Seguro Popular hospitals may not be supplied with needed medications and afflicted people would not have access to them. It is estimated that as of 2007 there are over 200,000 people in Mexico living with HIV/AIDS and only about 57 percent of the people who have it are receiving antiretroviral drugs (USAID Mexico, 2010). The program is still fairly new and, while more individuals have signed up for Seguro Popular since 2007, many still do not receive the medications they need.

**Prevention**

Since the HIV/AIDS virus first appeared in Mexico in 1983, the government has worked to establish many programs to help prevent the spread of the virus through political regulation and community awareness. In August 1988, the National Council for Prevention and Control of AIDS (CONASIDA) was created and it continues to be the primary governmental organization dealing with the management and prevention of this disease. Mexico also currently has 138 non-governmental organizations for people who live with HIV/AIDS (Zuniga et al., 1998). These programs have often come through to help individuals when Seguro Popular falls short.

Religion and lack of education both play a large role in sexual decisions and present a large barrier in preventing the spread of AIDS. Over 100 million individuals in Mexico are of the Roman Catholic faith and these persons make up 91% of the population (USAID Mexico, 2010). This religion states that no external form of birth control should be used in sexual practice; however, the rhythm method may be used. This decree prohibits the use of condoms and the only mode of defense against the spread of HIV. It also states that individuals should not engage in sexual practice until after marriage and, with 100 million followers, it is unlikely that each person will follow this decree. Instead, it makes sex a taboo topic of discussion and instills a sense of anxiety in a person who is concerned about the virus. It is obvious that the issue with religion and condom usage has become a moral issue. Once the population can fully accept the value of condom usage in the prevention of disease, individuals will not have shame and the disease can be prevented more easily.

Educational programs have been established to help combat social stigmas regarding HIV/AIDS in Mexico; however, much work is yet to be done in creating a level of comfort in discussing and living with the disease. Some high schools have sexual education classes in which children are taught about contraception and sexually transmitted diseases; however, by the time kids reach 14 to 16 years of age, many are already sexually active and have formed social opinions about condom usage and contraception. By this age, boys have already adopted many cultural ideals, such as machismo. The idea of machismo causes men not to use a condom due to the stigmas regarding inferred infidelity and condom usage. These males may not see the secondary usage of condoms in the prevention of disease and may therefore not use them. Children should be taught about these subjects at a much earlier age so that their first social opinions regarding sex and disease are those about prevention and safety.

While presenting a sex education talk at a preparatory school in Puerto Escondido, it was noted that many 14 to 16 year olds already had at least a vague idea about what condoms were and how to put one on; however, many did not know about sexually transmitted diseases and how they were spread. This goes to show that young individuals were already beginning to form opinions about condoms and contraception without being fully informed of their importance and usage.

The risk of transmission of the disease from mother to child also presents an important area for prevention. During a rotation at Hospital Civil's obstetrics and gynecology department, an HIV positive woman was due to give birth to her child. Luckily, she had already been tested and doctors knew of her diagnosis so steps could be taken to avoid disease transmission. She was not on antiretroviral therapy and the risk of transmitting HIV to her child was high. The doctors recommended that she give birth through Cesarian Section in order to avoid contact with the mother's blood and other bodily fluids; however, with better HIV patient care, antiretroviral medications could have been administered to lower the risk of HIV transmission from mother to child. Such preventative measures could greatly reduce HIV/AIDS prevalence in Mexico.

**HIV/AIDS in Mexico as a Consequence of Immigration and Machismo**

Sunken dark eyes, a glare of expression, and a pale face to reflect his state of being, the young man lay helplessly on the hospital bed. At 24, his life had hit a major roadblock: he was diagnosed HIV/AIDS. An immigrant, he contracted the disease while engaging in high-risk sexual activity during his stay in the United States. Back in México, he now faced life-threatening complications due to his positive HIV/AIDS status. A recent father of a three-month-old baby, the unknown HIV/AIDS status of his partner and his baby was alarming. However, this is not an isolated case. With a recent influx of Oaxacan immigrants to the United States more and more immigrants are returning home to their partners with sexually transmitted diseases (McGuire, 2006). Consequently, women with male partners who have immigrated to the United States are among the most at risk of HIV/AIDS contraction in Mexico.

 In 1983, the first cases of AIDS in Mexico emerged; of those, all involved individuals who had previously lived in the United States. By 1991, that figure had dropped to 41.3% (Magis-Rodriguez et al., 2004). Although this trend has since continued, it still underscores the link that exists between Mexican immigrants to the United States and the incidence of HIV/AIDS in Mexico. Immigrants from Mexico, a majority of whom are men, often follow a two-step process of infection. The first phase begins during their stay in the United States, especially amongst men who immigrate without their partner; individuals often have sexual contact with sex workers or with other men without a condom. Furthermore, they share syringes for the administration of vitamins, antibiotics, and injectable drugs. The second phase occurs when the individual returns to their place of origin in Mexico. Succumbing to long held beliefs about sexuality and reproductive control, the men demand sexual contact with their wives or partners who await their return and do so without the use of a condom (Hernández-Rosete et al., 2008).

 During their migratory process, men often engage in high risk sexual and drug behavior as a result of “the loneliness, isolation, lack of women, and insertion in a ‘more open’ society.” In comparison to non-migrants, Mexican men who immigrate to the United States tend to have more sexual partners, have a greater use of commercial partners, and there is a slight increase of sexual relations with another man (Magis-Rodríguez et al., 2004). Additionally, immigrants have a greater use of injected drugs for nonmedical reasons, which puts them at higher risk of contracting HIV/AIDS. In México, syringes can be purchased without a prescription; however, in the United States, undocumented immigrants and those with a limited income are at most risk of sharing needles since it is more difficult to obtain clean needles without a prescription. This high-risk behavior leads to an increase in the incidence of HIV/AIDS contraction for Mexicans immigrants when in the United States.

 Upon their return to Mexico, the men often engage in unprotected sex with their awaiting partners. Religious disapproval of contraceptives is an obvious reason for dismissing condoms; however, many immigrant men also engage in this type of activity to ensure that their partner is not having sexual relations with others while they are abroad. Additionally, impregnation is often the final goal and is seen as a reliable method of controlling partners. Once mothers, the women will need to spend more time at home nurturing the children, cleaning the home and tending to other household responsibilities like cooking. Therefore, the assumption is that less time spent outside the home will reduce the likelihood of infidelity on the part of their female partners. Due to traditional Mexican gender roles that dictate male power domination over their female partners, women are unable to impede acts of unprotected sex. In order to avoid conflict or even physical abuse, the women succumb to requests of sex without a condom. Having unprotected sex increases the woman’s vulnerability of contracting HIV/AIDS. Consequently, Mexico has seen an increased incidence of HIV/AIDS amongst communities with high levels of immigration to the United States and also among the female partners of immigrant men (Magis-Rodríguez et al., 2004). The Mexican states of Michoacán and Jalisco, who have a long history of high immigration rate to the United States, are also among the states with the highest incidence of HIV/AIDS. Since the United States has a higher rate of HIV/AIDS, immigrants who travel there have a greater risk of exposure and contraction of the disease, which can then be passed onto members of their community in Mexico upon their return.

**Prostitution**

Although prostitution is not accepted within the Mexican culture, it is still a profession that is exercised worldwide. The illegalization of such a profession has not succeeded; therefore, most of the states in Mexico have legalized prostitution. This practice is legalized in certain zones due to hygiene, prevention and control of the HIV/AIDS outbreak. Aside from the specific zones, this legalization comes with other restrictions. First, the women getting paid in exchange for sex must register in the specific zones where prostitution is legal. Secondly, these women need to report any new income or clients they receive. Lastly, they have to submit themselves to medical exams periodically in order to ensure that they don’t have any STIs that can then be spread and infect their clients (Hernandez-Tepichin 594).

 Even though there is a good structure for the control and prevention of HIV/AIDS within the juridical system in Mexico, there are also other factors that one must take into consideration that influence the control and prevention of HIV/AIDS. For example, different working environments might require different ways of enforcing the use of condoms as a form of HIV/AIDS prevention. A study was conducted between female sex workers working in bars and working on the streets to compare the different environments in order to find the best methods of HIV/AIDS prevention (Larios, Sandra 1336).

 In both environments, it was proven that self-efficacy is an important individual factor that influences condom use in female sex workers around the world. At the end of the study, women that worked in bars reported fewer unprotected sex acts than women that worked on the street. Also, the women that reported bars as their main work location stated having greater access to condoms (Larios, Sandra 1338). Few women from both groups stated municipal clinics, fellow sex workers, or pimps as a source for condoms, and less than forty percent of the bar workers and the majority of street workers identified “other sources”, such as hotels and clients, as a source condom accessibility (Larios, Sandra 1339).

 The different factors influencing these two types of work environment for sex workers proposes that there should be an inclusion of structural and environmental targets when developing HIV/AIDS prevention programs for this population (Larios, Sandra 1340). Street-based female sex workers are among the highest subgroup at risk of contracting HIV/AIDS as they are in an environment of a combination of more clients, less condom use, and a higher drug use. Poverty and drug use are important motivating factors for unprotected sex that could be manipulated by the government in ways of promoting the use of condoms within this subgroup. On the other hand, prevention methods for women that work in bars should focus on institutional motivations for promoting condom use, as well as individual level factors such as alcohol use as well as improving self-efficacy for the use of condoms. For both subgroups, there is a need for HIV/AIDS prevention that addresses both individual and environmental factors for the use of condoms; including poverty, drug and alcohol use, as well as sex work location (Larios, Sandra 1340). The legislation created for the control and prevention of HIV/AIDS would have a better outcome if it included these important structural and environmental differences.

**Cultural Perceptions of Treatment and Prevention**

As HIV/AIDS begins to spread in Mexico, teenagers becoming sexually active at a young age become exposed to this virus. The risk of HIV infection in adolescents is an ongoing problem due to the increased proportion of adolescents being sexually active at an early age without the use of a condom (Caballero-Hoyos Ramiro et al. s77). Because of the cultural views, teenagers don’t learn of the use of contraceptives, such as condoms, and are ignorant of the consequences being sexually active can bring. According to ENSA 2000, the Mexican population shows that it has discretion when it comes to sexuality, especially in the behavior of women. Therefore, the use of condoms has a negative connotation as is considered as something ‘erotic’ within the Mexican community (Gayet M. Cecilia s638). For example, during our brigades experience in Puerto Escondido, Oaxaca, we were given the chance to converse and inform young teenagers about the use of contraceptives. To our surprise, many of the kids knew about the use of condoms, but they did not know that the condom could be used as a way to prevent HIV/AIDS. We repeatedly quizzed them as to which birth control methods could prevent the transmission of sexually transmitted diseases, but they could not answer that only barriers such as male and female condoms could prevent sexually transmitted diseases. By the end of the presentation, they picked up the information, which made us come to the conclusion that they never had this subject presented to them.

On the other hand, Mexicans of higher social class do tend to be more open-minded and agree that it is important to educate their teenagers about sex. Mexicans of higher social class have higher awareness of how HIV/AIDS is transmitted and the lower classes have minimum to no knowledge of how the disease is spread. In relation to this, the majority of cases in relative to AIDS are associated with the individuals within the lower social classes. If HIV awareness is presented through AIDS prevention campaigns, its impact seems modest and favorable for adolescents in high socioeconomic status. Other influential structures to these results are the economic and cultural limitations of the majority of adolescents to obtain sources of information (Caballero-Hoyos Ramiro et al. s78). For example, adolescents that begin their sexual lives earlier, that speak an indigenous languages, and live in rural areas isolated from civilization, have higher risks of being infected with the virus because they do not have the resources they need to become educated on this issue (Gayet M. Cecilia s639). The spread of HIV/AIDS becomes a bigger problem as any sort of prevention or control of HIV/AIDS places limitations not only culturally, but also economically as the higher class becomes acculturated while the lower remain in the naïve stage.

Many HIV/AIDS infected Mexican individuals fail to seek clinical aid to help treat or minimize the symptoms of HIV/AIDS due to their cultural background. This creates many limitations in prevention and treatment of this disease. Instead, the ill seek health aid within their cultural comfort as they consult curanderos/as which practice traditional healing. Due to their cultural beliefs, many Latinos prefer complimentary and/or alternative therapies to treat such a virus rather than allopathic healthcare (Trafur M. Maritza et al. 83). Those that decide to seek both forms of treatment often fail to share this information with their physicians, creating a miscommunication between the doctors and the patient. This can then become problematic when the physician prescribes certain medicine that shouldn’t be taken with any herbal medicine as those used by curanderos/as.

Within the Mexican culture, curanderos/as have a long history of being seen as the people that heal and for that, they have gained the respect of most of the Mexican community. These ‘healers’ played an important role in the Mexican society as they became healers after long apprenticeships. What is unique within this cultural tradition, is that the healing process is not something that is learned; instead, it’s a spiritual call—a gift. Within the culture, it is believed that healing is a gift from a higher power. This tradition then ties with the belief of miracles within this community. As there is no cure for HIV/AIDS, so many Mexican individuals seek a miracle in hope of being cured. They seek these miracles through curanderismo as it brings them a sense of equilibrium between their spirit and nature (Trafur M. Maritza et al. 84). This gives the person a sense of comfort and faith.

On the other hand, Mexicans are integrating traditional beliefs and practices into their health routines not through consulting curandero/a, but by communicating with family members and friends (Trafur M. Maritza et al.84). Herbs such as leaves, stems, or flowers are used to treat HIV along with other ailments (Trafur M. Maritza et al. 85). The occupational therapist needs to be sensitive to the cultural needs of the Mexicans who may be using a traditional healer alongside of conventional treatment. When treating HIV/AIDS, the physician must take into consideration what the curandero/a takes in mind. They must establish a relationship with the person, valuing the family culture and focusing on the person’s physical, psychological and spiritual needs (Trafur M. Maritza et al. 86). As curanderismo brings a sense of peace and hope to the individual, it also becomes problematic as it can conflict with allopathic medicine. In order to control HIV/AIDS within the Mexican community, all cultural factors influencing the decision of the use of preventative methods should be considered.

**Limitations of HIV/AIDS Healthcare in Mexico**

 Mexico’s health system is best known for its universal healthcare called Seguro Popular, but, as good as this system is, it does contain flaws that impede the service they can provide to AIDS patients. The lack of special services, the distribution of clinics, the lack of financial accountability, and the lack of education all make it difficult for the AIDS patients to receive proper healthcare.

 Because the incidence and prevalence of AIDS in Mexico is relatively low, those that do have AIDS are at a disadvantage for receiving proper care. Money is mostly being supplied to other specialized care clinics because those diseases are much more of an issue in Mexico, leaving little funding for AIDS related healthcare. This leaves AIDS patients in Mexico as one of the most at risk populations for suffering adverse medical treatment (Lacey, 2007).

More specifically, there is an insufficient amount of specialized care facilities for AIDS patients. Primary Care clinics do not contain enough knowledge or materials to adequately provide treatment for this population. AIDS is a very serious and debilitating disease that shuts down the patient’s immune system, leaving the patient susceptible to a wide array of issues. It is important to provide doctors that specialize in AIDS and can have a better understanding of the issues associated with this virus. The growing incidence of this virus and its lack of specialized care is a bigger issue than the government believes it to be. Although, AIDS isn’t a huge threat in Mexico at the moment, with the increase in migrant AIDS from the US and the lack of prevention through specialized facilities, AIDS could become a national threat in the future (Lacey, 2007).

Also, the AIDS facilities that are available also lack sufficient technology to provide proper care for their patients. AIDS screening is a blood test that requires several different lab machines. For example, a centrifuge, which is just one small piece of equipment necessary for AIDS screening, costs close to one thousand dollars. Not to mention, you also need to have specialized workers that can operate these lab techniques. Many of these facilities only have a limited amount of funding and can’t afford the proper materials to conduct this type of specialized medicine properly (Lacey, 2007).

Next, the general distribution of specialty clinics for AIDS leaves those living in rural areas at a disadvantage for receiving care. Clinics are only located in the centers of popular cities. This means those that live in rural areas, which commonly are the people with little money, have to use an entire day travel to the clinic. With little money, a day of work is very important and most patients cannot a afford to miss it. Also, costs of transportation are expensive and patients often have to take more than one mode of transportation to get the their clinic. These factors decrease the likelihood that AIDS patients living in rural areas will attempt to go to a clinic and keep their disease under control (Del la Torre, et al, 16-19).

The main factor that limits the above issues is funding. Even if there was enough money, the government has no process to enforce financial accountability. Within the financial process there are too many layers to keep track of all the finances, leaving big opportunities for financial corruption. AIDS, being a very specialized and specific subgroup, has no way of tracking where and how they get their funding and most of the time the money for AIDS can get dispersed into other subgroups. There is no accountability to tell where money is coming from or where it is going (Corruption in Health Sector).

Lastly, the public health system in Mexico does not acknowledge AIDS as a large problem because only 1% of the population is afflicted with the disease. Subsequently, the government does not devote much of its funding toward prevention and education programs. Many AIDS patients do not know they have AIDS until they have a child or become very ill. There is a general taboo of talking about sexual relations in Mexico and the chances of HIV/AIDS prevalence improving without some sort of educational program is unlikely. The general cloaked stigma and denial of the severity of the issue provides a threat for the future of Mexico and AIDS. It’s important to provide education and information to the youth and other at-risk populations, but countering the perceptions of machismo and sexual relations is a challenge that will take time to overcome. This is why educational programs should be started now, even though AIDS is not a huge threat in Mexico at the moment(Lacey, 2007).

**Future Innovations**

 With the chance of an AIDS epidemic, future innovations have become a major focus in the clinical research field. The Joint United Nation’s Programme on HIV/AIDS (UNAIDS) has been working extensively on three potential treatments for AIDS: an AIDS vaccine, antisense gene therapy, and a transdermal vaccine (HIV-AIDS, 2010).

 First, the most exciting future treatment is the development of an AIDS vaccine. Like all vaccines, this would involve introducing a safe part of the virus into the human body so that the immune system can learn to detect this virus and make antibodies that can destroy this pathogen. This provides protection against future contact of HIV/AIDS in the future. Without this vaccine, IAVI estimates that the amount of people infected will double from 5 million a year to 10 million a year in the next 25 years. Even though the vaccine isn’t 100% effective, The International AIDS Vaccine Initiative (IAVI) estimates that it should be at least 50% effective. This means that if 30% of the population receives this vaccine, 5.6 million infections can be avoided in lower and middle class communities. Currently, 33 vaccines are in development and the future of this vaccine is promising (Demand and Impact).

 The next innovation in treatment is antisense gene therapy. Although this treatment doesn’t prevent HIV, it does prevent the development into of HIV into AIDS. This therapy uses genetic material derived from HIV to remove the disease causing aspects of the virus. Mock trials performed by the National Institute of Health (NIH) have shown this method to be up to 93% effective. The biggest downside to this method is you are forced to eat a pill everyday for the rest of your life, but it is better than the alternative (Castellani).

 The last innovative method is a transdermal vaccine. This system uses four patches to inject DNA plasmids into the human body that suppress virus replication and kill any HIV infected cells. Using mock trials, a company called Genetic Immunity was able to eliminate all HIV at a success rate of 70%. What is interesting about this method is it uses patches instead of needle injections. The patch can successfully deliver 50% of the DNA plasmids to the nearby lymph glands that help control your immune system. This new system not only is a huge breakthrough in AIDS but it has potential to help people afraid of needles with a countless number of other vaccines and procedures (Lisziewicz, 2010).

 All of these anti-AIDS methods provide promise for the future and our battle against AIDS, but these innovations can’t be used to their potential unless people have an appropriate perception of the AIDS issue and an efficient medical system that works to make this dream a reality. Mexico needs to take progressive steps with their system and their attitude in order to prevent an uprising of an AIDS epidemic. We all need to be aware now so we are prepared for the uncertainty of the future.

**Conclusion**

The large percentage of untreated patients living with HIV/AIDS requires the attention of public health community in Mexico. The disproportionately high prevalence of HIV/AIDS in certain subgroups of the Mexican population necessitates investigation into the factors that cause these disparities. While diagnosis and treatment methods are available and publically funded, cultural variables prevent the use of contraception and discourage patients from openly seeking treatment. Traditionally conservative cultural and religious values also make sex education, the use of condoms, and other prevention methods taboo. In our experience presenting sex education to young teenagers in Puerto Escondido, there were large gaps in their knowledge of proper contraception techniques and the risks of sexually transmitted diseases. The uninformed youth face high risk for disease transmission, as many begin engaging in sexual activity before fully understanding sexually transmitted diseases and safe sex practices. The same stigmas that keep them from using prevention methods hinder their ability to seek screening and treatment.

 The large amount of Mexicans that immigrate between Mexico and the United States constitute one of the greatest contributors to disease transmission, as this subgroup is more likely to engage in high risk sex in the United States and engage in intravenous drug use. Men from this subgroup transmit HIV/AIDS to their spouses upon their return to Mexico. The culture of machismo discourages condom use as it connotes infidelity within a relationship, furthering the risk of disease transmission. Recent increases of immigration between Mexico and the United States presents a higher risk for disease transmission. Even with education about contraception, prevention, screening and treatment, these cultural aspects must be taken into account in order to make meaningful, widespread behavioral change.

 Sex workers, one of the most highly affected subgroups face great burdens of cultural perception in efforts to seek screening and treatment. EEEven though prostitution is legal and regulated by the government, sex workers may avoid registration in order to avoid the stigmas attached. Additionally, sex workers that work in more secretive locations are much more difficult to regulate, and may not receive the regular doctor's checkups necessary for screening and prevention. As many sex workers are exploited by their employers, sex workers are at the mercy of those they work for as far as contraception practice, despite the presence of municipal clinics for sex workers.

 Economic variables also present great disparities in HIV/AIDS prevalence in Mexico, as populations of lower socioeconomic status are more likely to be affected. Individuals from higher socioeconomic statuses are more likely to be open minded to contraception education, while poorer individuals are more likely to hold traditional conservative views which reject open conversation about sex. Additionally, populations of a higher socioeconomic status are more likely to have greater access to education at an earlier age than poorer populations. Equality in access to education, screening and treatment could greatly reduce HIV/AIDS in Mexico.

 The history of curanderismo and traditional healing practices is also vital in understanding how to treat HIV/AIDS in Mexico. Spiritual healing is deeply rooted in Mexican culture, however HIV/AIDS patients must understand that it should be used as a compliment to allopathic medicine, as antiretroviral therapy is currently the most successful treatment for HIV/AIDS. However, doctors must be culturally competent and understand that the use of traditional medicine serves a spiritual and psychological purpose for the patient. This understanding is necessary to ensure patient compliance in the face of the social stigmas attached with HIV/AIDS.

 The lack of resources in the Mexican healthcare system leaves large gaps in accessible specialized HIV/AIDS care. Many clinics do not have the materials necessary to adequately screen for and treat HIV/AIDS. Poor patients in rural populations, those at some of the highest risk of HIV/AIDS transmission, may have to travel for days in order to reach a specialized clinic, thus seeking treatment outweighs the financial burden. There remains a need for better transparency, oversight and accountability as far as distribution of funds, as corruption in the system is a large contributing factor to the lack of funds for HIV/AIDS care.

 Current public health beliefs do not place a high priority on HIV/AIDS prevention and healthcare, but as high risk populations are becoming largely more affected, public health campaigns must be implemented for education, prevention, screening and treatment. Additionally, new and innovative treatments are being developed, including vaccinations and antisense gene therapy. With HIV/AIDS prevalence rising globally, Mexican health officials should invest in such campaigns in order to control the spread of HIV/AIDS.

 One of our clinical observations showed a happily married couple that was pregnant with their first child. Unfortunately this family recently discovered that the male in the relationship had the HIV virus. Although the father seemed to be in good health and wasn’t showing any symptoms, there was immediate concern for his pregnant wife and, more importantly, their child. The wife and unborn child were tested and then returned to the clinic a month later. Fortunately, both the wife and their unborn child tested negative for the HIV virus, but the doctor suggested the woman have a Cesarean section to limit the amount of further contact with the HIV that could be present in the mother’s fluids and blood. One can imagine the amount of stress that couple went through during the month of uncertainty. The idea of something being wrong with your unborn child can be unbearable for first time parents. With more aggressive campaigns for HIV screening, scares like these can be avoided and newly expecting couples would not have to be surprised with this life-changing information. This couple was lucky in that neither the wife or unborn child was infected with the virus, but there are hundreds of other couples that are not so lucky. Public health programs should place priority on providing earlier screening so that pregnancy is not the first time this information is discovered.

 In conclusion, social stigmas, economic disparities, and traditional cultural values present barriers in HIV/AIDS education, prevention, screening and treatment. While funding and better oversight and transparency of funding in the Mexican health system would improve the resources available for patient screening care, public health strategies must take into account the cultural factors that prevent education, screening and treatment. As HIV/AIDS is becoming more prevalent worldwide, Mexican public health officials must begin education strategies at a younger age, increasing specialized care availability, eliminating corruption involved in the resources allocated to HIV/AIDS, all while employing strategies that address the stigma and cultural taboo that prevents HIV/AIDS prevention, screening and treatment.

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