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## **Conquering Two Beasts: Lowering HIV and Hunger in Lesotho**

### Country

The small South African country Lesotho is one of the poorest areas of the world. Lesotho has been struggling with infectious diseases that account for many of the country's deaths, specifically, HIV/AIDS. HIV (human immunodeficiency virus) attacks one's immune system. If not treated, it can lead to AIDS (acquired immunodeficiency syndrome). Currently, there is no cure for these diseases, which last for one's entire lifetime. However, with effective medical care HIV can be controlled, permitting many of those inflicted to live long, healthy lives. Unfortunately, this practice is not the case in Lesotho. According to the Centers for Disease Control and Prevention (CDC), before the start of the COVID-19 pandemic, HIV was the leading cause of death in Lesotho. The HIV epidemic is closely linked to the country's ongoing problems of food security, hunger, and malnutrition (Peregoy). The deadly combination of these threats has a detrimental effect on all aspects of life in the country.

Lesotho has a parliamentary constitutional monarchy. The country is known as "The Mountain Kingdom" due to its mountainous terrain. Lesotho is cold and dry in the winter and, despite its high elevation, hot and wet in the summer. Lesotho possesses natural resources such as water, diamonds, and agricultural and grazing land. Its major crops include maize, sorghum, wheat, barley, oats, beans, and potatoes (Help Lesotho). Roughly 75% of the country is rural (World Population Review). Lesotho's arable land is estimated at about 9% and the average farm size in Lesotho is approximately 1.3 hectares. For context, this size is slightly smaller than one football field. (Food and Agricultural Organization of the United States).

### Typical Family

Living conditions in Lesotho are unsatisfactory. "Most people live in one or two-room houses made of concrete blocks with tin roofs. In the rural and mountain areas, people live in round-shaped huts called rondavels, which are made of stone and mud with thatch roofs." Curtains are used to divide homes into a bedroom and a kitchen, accommodating the average family of 3.7. There is no heat, insulation, or electricity, but citizens do have access to telephones and markets (Help Lesotho). To get water (which is mostly unsafe), people must travel more than 30 minutes (World Vision International). "Due to this deficiency in clean water, there is inadequate sanitation and hygiene facilities, which can increase vulnerability to disease and infection. The country's roads are not of high quality due to economic strain (UNICEF).

Weather permitting, citizens can feed themselves from their harvest. "People eat steamed bread, potatoes, rice, and porridge. There is often a small fire in huts, which is how people cook meals. The diet is primarily starch and fat, with very little protein." When one lacks most of the essential nutrients in a diet (especially protein), the immune system is not nourished. That system is already significantly debilitated in those with HIV/AIDS (Help Lesotho).

Many students have to walk almost a total of four hours to school and back. While school is affordable at the primary levels, "the lack of resources to maintain infrastructure leaves school classrooms dilapidated. Teachers board at the school during the week, often in horrible housing conditions, have inadequate funding from the government and do not have the proper training to educate children" (Help Lesotho).

Healthcare in Lesotho is also a challenge; “81% of the population lives in remote rural villages. For one to access healthcare, one must often walk several hours over rough mountain paths to the nearest clinic. Access to healthcare in Lesotho is also limited by poverty and by lack of personnel” (Murman and Sullivan).

### Challenges

“The major barriers that families face in Lesotho are poverty, food insecurity, HIV, and unemployment. as these four elements constrain the ability of households to sustain themselves” (Humanium). The lack of employment in Lesotho increases poverty, which impacts food security. If one is employed (most jobs are in labor or textiles), an average salary is just above 10,000 U.S. Dollars. This is not enough to be comfortable financially, especially because Lesotho deeply struggles with food insecurity, education, and healthcare. Child-headed households are increasing due to deaths caused by HIV/AIDS. “AIDS is characterized by recurrent periods of sickness, and so recurrent loss of labor, which eventually erodes agricultural production and food security... since agriculture represents a large proportion of the gross domestic product, this loss in labor could have severe impacts on the national economy” (Food and Agricultural Organization).

“Lesotho is burdened with the second-highest HIV prevalence rate in the world – one in four people in the country are living with HIV” (Help Lesotho). “Testing and treatment coverage has dramatically improved in recent years, but poverty, gender inequality, and HIV stigma and discrimination remain major barriers to HIV prevention in Lesotho.” Because of gender inequality, HIV/AIDS is most common in women. A shocking statistic states that “28% of young men and 27% of young women in southern Africa do not believe a woman has the right to refuse sex with a partner. Beliefs such as these limit women's power within relationships and increase their vulnerability to sexual violence and HIV.” Mother-to-child transmission impacts children and many become orphans. Men, especially those sexually active with the same gender, are also affected. “Homosexuality is not accepted in Lesotho, so many men do not receive treatment for HIV due to experiencing stigma and human rights abuses, particularly verbal abuse, blackmail, and physical aggression” (Avert).

### What Has Been Done in Lesotho and the United States

Lesotho attempts to take a variety of approaches to limit the spread of HIV/AIDS, such as providing condoms for men. There were improvements, however, this did not stop the spread. Another solution used in Lesotho is HIV and sex education and utilizing various social media platforms. “Cash transfer programs have also been found to be an effective method of HIV prevention in Lesotho.” There are a variety of organizations that collect donations that go to help HIV/AIDS in Lesotho. Lastly, “voluntary medical male circumcision is used for the prevention of HIV infection in Lesotho. However, implementing it has been challenging in rural areas, where boys are more likely to be circumcised during initiation rituals” (Avert). “Scientists say male circumcision reduces the risk of HIV infection because it removes the tissue in the foreskin that is particularly vulnerable to the virus...” (UNAIDS). It also makes washing the penis much easier, which is beneficial because hygiene in Lesotho is less than satisfactory (Mayo Clinic).

When used consistently and correctly, condoms are a very effective way to prevent the spread of HIV/AIDS. Due to the prevalence and high risk of HIV/AIDS in Lesotho, some other options in addition to condoms may be beneficial, such as pre-exposure prophylaxis (PrEP) or antiretroviral therapy (ART); both have been increasing in Lesotho. Pre-exposure prophylaxis (or PrEP) is for those who are at a very high risk of getting HIV. Unfortunately, it is not as widely available in Lesotho. The pill (brand name Truvada) contains two medicines (tenofovir and emtricitabine) that are used in combination with other medicines to treat HIV. When someone is exposed to HIV through sex or injection drug use, these

medicines can work to keep the virus from establishing a permanent infection (Centers for Disease Control and Prevention). Studies have shown that PrEP reduces the risk of getting HIV from sex by about 99% when taken daily. Among people who inject drugs, PrEP reduces the risk of getting HIV by at least 74% when taken daily. PrEP is much less effective if it is not taken consistently. The medicine Lesotho has already experienced through a “test and treat” strategy is antiretroviral therapy, also known as ART. This strategy means every person who tests HIV positive will be offered ART regardless of their CD4 count (Avert). Taken as prescribed, this medicine reduces the amount of HIV in the body (viral load) to a very low level, which keeps the immune system working and prevents. This is called viral suppression—defined as having less than 200 copies of HIV per milliliter of blood. ART can even make the viral load so low that a test can’t detect it, and this is called an undetectable viral load (Centers for Disease Control and Prevention). According to the U.S. Centers for Disease Control and Prevention (CDC), when an individual living with HIV is on antiretroviral therapy and the level of HIV in their body is undetectable, there is “effectively no risk” of sexual transmission (Kaiser Family Foundation). It has been found that treating mothers with ART also lowers the transmission rate of HIV to their children. Unfortunately, in recent years, those improvements have begun to reverse.

The U.S. has been primarily using ART to treat HIV/AIDS. “Numerous federal and local government departments and agencies are involved in the domestic HIV/AIDS response, which together provides disease surveillance, prevention, care, support services, and health insurance coverage.” Also, HIV testing regularly is important for both treatment and prevention. Lastly, the Affordable Care Act (ACA), passed in March 2010, provided new opportunities for expanding health care access, prevention, and treatment services for millions of people in the U.S., including many people with, or at risk for, HIV. Those living with HIV benefit from new protections in the law that make access to health coverage more equitable (Kaiser Family Foundation).

### Solutions and Recommendations

Improving the prevention plans in place in Lesotho, while combining those with the plans used in the U.S., would lower Lesotho’s rates of HIV/AIDS, thus combatting the ongoing problem of hunger. The elements of that plan would be:

1. Increasing the production of ART, proper protection, and HIV tests in the United States, allowing our nation to transport treatments to Lesotho.
2. Educating the leaders of Lesotho in American Healthcare
3. Continue educating children about safe intercourse as well as implicating health class and sex education into the school curriculum.
4. Continuing circumcision in Lesotho and encouraging refraining from sexual activity.

This ambitious plan, discussed in more detail below, would meet all of the prominent needs of Lesotho’s people.

Collaborative support could conquer HIV/AIDS in the country. In my opinion, convincing citizens to donate 5 dollars should not be a primary concern. For the past year and a half or so, the United States has been facing the effects of the coronavirus pandemic. Due to the pandemic, we have experienced many challenges that include, but are not limited to, economic downfall (unemployment, slower manufacturing of certain goods, poor cash flow), challenges with education (online learning, delay in test-taking), and disruption of social events, which can lead to a decline of good mental health (US National Library of Medicine).

In many ways, the issues that we have been facing as a country are quite similar to the challenges that Lesotho faces on a daily basis. In a way, we have gotten a *very* small glimpse into how Lesotho and other

countries struggle with deadly disease outbreaks. I would hope that our recent experiences with the coronavirus pandemic can aid United States citizens in showing compassion and empathy for Lesotho's ongoing combat with HIV/AIDS.

To ensure that there will be enough treatment produced, pharmaceutical companies should double the current production of treatments such as ART, as well as tests for the disease. This plan is realistic economically. If everyone who is financially stable enough to do so donated 5 dollars, as a country we could raise about 1 billion dollars. Also, many of the organizations that support Lesotho, such as Help Lesotho, are based in other countries. According to Help Lesotho, the donations they receive help:

- Support 15-20,000 beneficiaries annually, 75% of whom are girls and women
- Deliver life skills and HIV/AIDS education to over 4,000 children and youth
- Respond to local needs in the 11 rural communities we serve
- Hire experienced staff with the professional skills needed to effectively deliver programs and support our beneficiaries
- Listen, support, and respond to people who are dealing with extreme trauma, grief and loss, and abandonment
- Be a family for those who do not have one (Help Lesotho)

Those organizations would be mentoring U.S. efforts to teach Lesotho about our healthcare methods. The plan would be organized by one or more federal and local government departments and agencies such as the Centers for Disease Control and Prevention. These organizations can act on lessons learned from the Affordable Care Act (ACA) in the United States. As stated previously, access to healthcare is limited in Lesotho due to a lack of resources. Thus, Lesotho may not have the resources necessary to implement these practices. These organizations and American doctors will train the doctors of Lesotho to treat their patients with what they have and how to advance their current facilities and supplies. In addition, the money raised will be used to provide Lesotho with more advanced ways of treatment that we use in American Healthcare practices. As I have depicted, the U.S. has managed HIV/AIDS and has gotten it under control. Therefore, I feel that the people of Lesotho would be doing themselves a great disadvantage to not use American doctors and professionals. Despite this, I can certainly understand why one would be hesitant to put their health in another's hands.

The United States created a diplomatic relationship with Lesotho in 1966, after their independence from the United Kingdom. Since then, "Lesotho and the United States have had productive bilateral relations." U.S. foreign policy has been attempting to develop Lesotho into a stable, healthy country (U.S. Department of State). This current work can be used as a foundation to take this project to the next level with my research, ideas, and plan that I have closely developed this year. The result would be greater, more attainable resources. Of course, again, the coronavirus pandemic acts as a barrier, however, with the success of the COVID-19 vaccine, there can hopefully be a balance to tend to other deadly diseases, such as HIV/AIDS.

While Lesotho already has sex education outside of schools, it would be beneficial to take it to the next level. Those in school would benefit from health and wellness courses informing them about safe intercourse. One aspect of my plan that has not been properly implemented in Lesotho is using proper protection when engaging in oral sex, as HIV can spread this way as well. Examples of protection for oral sex include condoms and dental dams. According to the CDC, a dental dam is a "latex or polyurethane sheets used between the mouth and vagina or anus during oral sex". In relation to my previous point regarding U.S. organizations mentoring Lesotho in their healthcare methods, the CDC has very detailed resources regarding safe intercourse and how to properly use protection. In addition, these courses will outline the importance of good nutrition. Building off of previous elements of the plan, the money raised for treatment and prevention can also be used to initially provide Lesotho with the food needed to obtain

these nutrients, as well as implicating more protein into their diet. Unfortunately, since only 20% of children go to high school, other alternatives to pass along this information will need to be developed. Some ideas I have are distributing pamphlets or textbooks to each home, guest speakers, and organized meetings open to all citizens.

Lesotho should continue circumcision practices. In addition to this, a period during which citizens refrain from premarital intercourse would yield tangible benefit. Some may be opposed to this idea; however, Lesotho's primary religion is Christianity, which already advises one to refrain from intercourse until marriage. Therefore, this may provide a cultural bridge to premarital abstinence. According to HIV.gov, abstinence is the only 100% effective way to prevent HIV.

Understandably, it may be a challenge to make people wear condoms and briefly refrain from intercourse, but I am hopeful that the quality of sex education in Lesotho will convince the citizens of Lesotho to "hop on board" and fight back against HIV/AIDS.

Importantly, women being considered inferior to men and the negative stigmas attached to members of the LGBTQ+ community are cultural normality's that must be carefully addressed. My suggested solutions address this issue by raising awareness to the LGBTQ+ community and increasing feminism in the country. Funds from organizations interested in global equity can provide needed resources as well as an increase in projects to help address the gender inequalities in Lesotho. These inequalities and stigmas are significant reasons why current and past interventions in decreasing HIV transmission have been unsuccessful.

If all goes as planned, Lesotho's HIV/AIDS rates will decrease, resulting in an increase in jobs and education for children, which would result in more food. The current coronavirus pandemic is an obstacle, but it proves to be an opportunity as health and safety are paramount considerations and focus at this time. Accomplishing these goals will benefit Lesotho and, hopefully, experiences doing so will serve as a guide to other countries in the world struggling with the same issue.

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