Leah Marek Washington High School Washington, IA, USA Cameroon, Infectious Diseases

**Healing Cameroon** Cameroon is a small, ethnically diverse country in Africa. It is also one of the most urban countries in western Africa. Cameroon features diversity in its geography, climate, and residents. However, the one thing that is consistent across the country, is the prevalence of infectious diseases. Because of the poor living conditions, bad roads, and unstable healthcare system, common diseases take many lives throughout the country. Without the help of international organizations, Cameroon would be unable to help its citizens in need, leading to a worldwide effect. Luckily, the manageability of these diseases is increasing due to increased support from external sources.

Cameroon is the 52<sup>nd</sup> most populous country with over twenty-six million people. However, because of Cameroon's size of 183,521 square miles, it has a low population density. It is the twenty-fourth largest country in the world (Green). Cameroon is a Unitary Presidential Republic, meaning most of the power is given to the national government (AFS-USA). Cameroon is known for its geographic diversity, allowing a wide range of crops to be grown. Within the country, around thirteen percent of land is arable. Their main crops are plantains, beef, cocoa beans, and bananas. Their main exports are coco, coffee, bananas, and palm oil. The climate and geography of Cameroon varies greatly throughout the country. It is tropical along the coast and hot in the northern part of the country. It is also extremely wet and experiences between two-hundred and fifty and four-hundred centimeters of rain a year (Green).

The typical family size in Cameroon is five, however it is common for extended family to live together because of financial situations. A third of the population lives below the international poverty level on less than \$1.25 a day. Of those living below the poverty line, over fifty percent of them are households headed by women. Houses are typically huts made with mud bricks, grass, or wood. Most houses have thatch roofs and require constant maintenance (Cite). The typical mean contains corn, groundnuts, potatoes, and rice. A common dish is Fufu, it is made by mixing flour into boiling water and creating a thick paste (Cite). In most households, the mother prepares the food for the rest of the family.

Cameroon offers a wide variety of jobs in many different industries, meaning salaries are also extremely diverse. The average salary in Cameroon is 464,00 XAF a month (Salary in Cameroon). That is around seven-hundred and eighty US dollars. Healthcare in Cameroon is extremely poor. There is little to no health insurance, leaving families responsible to pay for their treatments. Because of the low income in Cameroon, most families also can't afford to do so.

Medical facilities are often low quality with poor sanitation, especially in rural areas. The doctor to patient ratio is 1:12,500, making it almost impossible to ensure quality care (Health Insurance).

While healthcare is poor, education is improving. Cameroon provides free compulsory education for children ages six to twelve. The government also provides funds for mission and private schools. After six years of primary schooling, there are seven years of secondary schooling available (Cameroon Education). Families in rural Cameroon struggle to gain access to clean water, electricity, good roads, or healthcare. Because of this, water-related diseases are common, especially among children. However, access to clean drinking water is significantly better in urban areas. Both urban and rural areas struggle to find improved sanitation facilities. Barriers that prevent Cameroons from getting the care and nutrients they need include food security and poor rural transport. This leads to higher rates of malnutrition and illness from eating unsafe food.

Besides facing nutritional issues, Cameroon also has a very high risk of infectious diseases. Since 2008, the number of infectious diseases have continued to rise (Global Health). Infectious diseases can affect not only people and public health, but also on the economic state of the country. These diseases can stem from poor environmental conditions and wildlife. Overall, seventy-two percent of these diseases come from wildlife. According to the National Library of Medicine, "Several factors of emergence have been identified: microbial adaptation and change, human susceptibility to infection, climate and weather, changing ecosystems, human demographics and behavior, economic development and land use, international travel and commerce, technology and industry, breakdown of public health measures, poverty and social inequality, war and famine, lack of political will and intent to harm" (Fenollar). These factors are especially present in Africa and developing countries, such as Cameroon.

The most common diseases there are HIV and malaria that came from wild monkeys. However, these diseases are magnified because of poor healthcare and surveillance. The Worldwatch Institute states, "African countries rank among the lowest in per-capita spending on health and the availability of physicians" (Fenollar). Half of the deaths in Africa are caused by infectious diseases. However, they still go unnoticed and un-helped by the rest of the World. This fact not only hurts them, but can also spread more sickness throughout the World.

HIV is the most deadly disease Cameroon faces and is the leading cause of death in the country. According to Borgen, "six new HIV infections occur every hour" (Project, Borgen). HIV is followed by malaria and lower respiratory infections in the numbers of deaths caused. Bronchitis and pneumonia are results of the lower respiratory infections and without treatment can be deadly to their hosts. Diarrheal diseases also ravage Cameroon. Despite being extremely

treatable, they account for fourteen percent of deaths in the country (Project, Borgen). These diseases are more common in rural or poverty ridden areas because of the poor living conditions. Luckily, most of these diseases can be treated easily with the proper resources and effort.

There are programs set up to help these issues. In 2007, the U.S joined forces with Cameroon to alleviate the effects of HIV, malaria, influenza, and other diseases. The U.S. first gained diplomatic relations with Cameroon in nineteen-sixty after their independence. They work together to solve different issues including healthcare, humanitarian assistance, and environmental protection. The plan to eliminate HIV and Aids is called the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). The Office of the U.S. Global AIDS Coordinator and Global Health Diplomacy head this program and works with five different agencies to support it. In total, this program has given over eighty five billion dollars globally and five-hundred million to Cameroon alone to fight HIV/AIDS. The annual Cameroon PEPFAR budget is around twenty-six million (PEPFAR).

The Peace Corps also works within six different regions in Cameroon to promote and improve health. Of course, Cameroon plays a large part as well, "About 15 Cameroonian and international implementing partners conduct field activities, often in collaboration with local sub-partners, in the areas of prevention of mother-to-child HIV transmission (PMTCT), prevention of sexual HIV transmission, blood safety, HIV testing and counseling, HIV care and support, laboratory strengthening, strategic information, and other health systems strengthening. All PEPFAR investments are aligned with Cameroon's National HIV/AIDS Strategic Plan and work to strengthen the capacity of Cameroon's government, non-governmental and private sectors, and civil society to respond to the HIV/AIDS epidemic" (Results and Impact). By working together, Cameroon and the United States can put an end to the spread of HIV/AIDs.

Within this program, there are many actions taken to prevent HIV/AIDS. They provide circumcisions for men, antiretroviral treatment, support for vulnerable children, training for healthcare workers, and test infants for HIV. Workers are trained on HIV testing, dried spot collection, blood safety, and quality assurance. This training helps to identify and treat cases and provides a sustainable solution to this issue. They also provide "a 2-year advanced Field Epidemiology Training Program was implemented to develop well-trained field epidemiologists and disease detectives at the national levels of the MOH and Ministry of Livestock," (Global Health). Tuberculosis is also a side effect of HIV and often causes death. The CDC tests for tuberculosis to prevent, find, and treat cases. These practices can help stop infectious diseases from becoming epidemics. PEPFAR also provides community led monitoring to monitor quality and accessibility of their services. This ensures the safety and use of facilities.

The Global Health Security Agenda (GHSA) action packages are helping Cameroon build their public health services to prevent the spread of common diseases. This program is run by The Centers for Disease Control and Prevention. They began HIV/AIDS work in Cameroon in 1998 and transitioned to a more complete program in 2007. According to a report from CDC, "The Global Health Security Agenda (GHSA) is a multi-sectoral and multilateral effort that was launched in 2014 to accelerate progress toward compliance with the International Health Regulations (IHR) (2005), the World Organization for Animal Health's Performance of Veterinary Services, the Biological Weapons Convention, and other relevant international frameworks and agreements" (Global Health).

This plan aims to reduce public health threats, increase emergency planning and response in outbreaks, and lessen the impact of outbreaks through proper treatment. So far, this program has provided over one thousand rapid HIV testing laboratories, tested over eight thousand infants, and trained over four hundred healthcare workers (Global Health). In the future, the GHSA wants to continue their previous program while increasing laboratory systems and treating animals to prevent zoonotic diseases. These programs will help the GHSA to prevent, detect, and respond to threats. As the GHSA says, "An infectious disease threat anywhere can be a threat everywhere" (Global Health). The GHSA also provides action packages that supply knowledge and skills in eleven different technical areas. These packages "help Cameroon build core public health capacities in disease surveillance, laboratory systems, workforce development, and emergency management" (Global Health). Through this program knowledge is spread to improve the overall state of health in the country and world.

The President's Malaria Initiative (PMI) helps many children and pregnant women in Cameroon. PMI is used to control and eliminate premature death and disability caused by contracting malaria, as the entire country is at risk for the disease. This program concluded that a third of all children in Cameroon tested positive for this disease. Their objection is to reduce mortality by seventy-five percent through their efforts (Global Health).

This program assigns an advisor to implement malaria prevention and control methods. These methods include, "routine distribution of insecticide-treated nets, improved entomological monitoring and insecticide and drug resistance management, improved case management in health facilities and at the community level, strengthening programs to prevent malaria in pregnancy, and provision of seasonal chemoprevention to prevent malaria in children under five during the peak transmission season" (Global Health). In order to achieve these things, this plan operates in six areas, including management, communication, and training. Each of these three programs are improving the health of the people of Cameroon significantly. They are ensuring a better tomorrow for Cameroon and the rest of the World by preventing and treating

these diseases

However, due to the current pandemic proceeding with these programs could obviously be difficult. One way we continue to fight infectious disease during this time is through sharing knowledge and research with other countries. With increased focus on fighting diseases at home, the United States could have major breakthroughs in how to combat many different illnesses. By sharing these solutions, even though we aren't able to physically be with our friends around the world, we can still help each other. Another major point of the solutions I mentioned was the sustainability of their programs. Healthcare workers that live in these struggling countries, such as Cameroon, have been trained to do their job without extra assistance. This allows the progress to continue even as we are unable to visit. I believe with a bit of creativity and open lines of communication, we can continue to fight infectious diseases around the world, no matter the circumstances.

Infectious diseases are a continuing problem in Cameroon that has seen very little improvement in past years. Luckily, new and continuing programs are helping to improve the state of disease in this country. With improved education that teaches about disease prevention and control, Cameroon will be able to improve the health of its people and the economic state of the country. This can also lead to protecting the rest of the World from contracting these diseases. As Cameroon continues to receive assistance from outside organizations, it is focusing more on the health of the citizens and helping them to live long, healthy lives.

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