Samantha Sanderson Roland-Story High School Story City, IA, USA Paraguay, Infectious Disease

Stopping the Spread of Infectious Disease in Paraguay

Paraguay is a landlocked country between Bolivia, Brazil, and Argentina in south-central South America. The population of Paraguay is 7,197,575 people. The Paraguay river runs from north to south forming two geographical regions. The eastern region is called the Región Oriental and the western region is referred to as Región Occidental. The people of Paraguay are facing many struggles, including trying to stay healthy. These families deal with improper living conditions and not always having a consistent food source. Another issue people face with living in Paraguay is infectious diseases. There are people just like you and I suffering from illnesses caused by the living conditions and climate of Paraguay. I believe one way to help these innocent people is better healthcare.

The majority of families in Paraguay live in urban areas. 61.8% of families to be exact. Their most common way to travel is by road systems. These road systems are mostly gravel. The few roads that are paved need work done to better them. Furthermore, the climate in Paraguay is divided into two regions. The Eastern region of Paraguay is subtropical. While around the Chaco Boreal and extending North is tropical. The temperature is rather high all year round. "Summer temperatures, between October and March, generally range from 75-100 degrees Fahrenheit (23-38 degrees Celsius). Winter temperatures usually range from 60-75 degrees Fahrenheit (16-24 degrees Celsius), although extremes in the 30s and 100s degrees Fahrenheit (about -1 and 40 degrees Celsius) are not uncommon. Frost occurs frequently in the Eastern Region" (Britannica, 2021). In some regions near the Paraguay River rainfall averages between 55-65 inches of rain annually. Moving farther away and closer to regions past the Chao Boreal, rainfall averages about 30 inches annually. Throughout the course of a year, the country suffers from both floods and droughts causing the loss of agricultural products.

Family is a big priority in Paraguay. Families live together in groups of parents with their children and oftentimes grandparents. Although sometimes their marriages have fallen apart they stay together because divorce is frowned upon in the Roman Catholic Church. The Roman Catholic Church is the main church in this country. Family in Paraguay extends beyond the immediate and extended family. Other members of the family are joined by becoming the godparents of children. The living conditions are oftentimes not the best. The food supply for the majority of people is from small rural farms. The average family diet consists of fruits, vegetables, and beef. Pork and Chicken are also included in the diet but beef makes up the majority of their diet. The top exports for Paraguay include corn, cotton, tobacco, and sugarcane. All of these exports are farm products, and about 53.8% of their land is cultivated. This means that about half of the land in Paraguay is being used to grow crops and being used as farmland.

The top industries in Paraguay are steel, iron ore, cement, soybeans, automobiles, and manufacturing plants. One of the societal issues in Paraguay is child labor. Children are working to help support their families. Even though children are trying to help out 15% of families are still living on one Euro or less a day. One euro is equal to \$1.17 US dollars. The children in Paraguay typically only finish school through sixth grade. While public schooling is free up to a certain age, not all graduate high school. This

oftentimes happens because children do not have the proper access to education. There are not enough primary schools in the country to accommodate all of the children. As children begin their careers at extremely young ages they also begin creating a family. These children are being married as teenagers. The legal age of marriage in Paraguay is 16 years old.

There are many challenges that the people of Paraguay face. Some of these include poverty, access to education, having child soldiers, child labor, child trafficking, and the spread of infectious disease. This past year infectious diseases have been spreading rapidly, the main disease spreading being COVID-19. While other prevalent infectious diseases have included: infectious encephalitis, the Zika virus, some infectious intestinal diseases, yellow fever, measles, tuberculosis, acute respiratory infections, dysentery, hookworm, and hepatitis. The spread of these diseases can happen from person to person or in some cases from animal to person. Some of these diseases are caused because most Paraguayans do not have access to clean drinking water or sanitary practices. An example of animal-to-person transmission is the Zika virus. The Zika virus was an epidemic that started in Brazil and moved into the bordering country of Paraguay. The virus spread from mosquitoes to humans. More recently COVID-19 has been spreading through Paraguay. When COVID-19 first started appearing in the world most things were shut down. Things such as schools stopped going in person. This caused education in Paraguay to become even less accessible to families. Most places went online for school but this was an issue for families that did not have access to the internet, electricity, or proper technology to complete school work. Not only has the spread of infectious disease in the past year caused Paraguayans to lose education, but families also had less access to food. This past year due to COVID-19 the amount of malnutrition in Paraguay has increased. Infectious diseases cause people to not be able to work or supply others with the food they need. Infectious diseases also tend to become easier to transmit from one person to another in urban areas. The majority of the Paraguayan population is urban, causing the spread of disease to be much easier.

Another issue that the people of Paraguay face is a highly understaffed and overwhelmed healthcare system. Part of the reason that healthcare is so understaffed is that children are not finishing their education and quitting after the sixth grade. The healthcare system in Paraguay is very disorganized. While public healthcare is cheaper than private, the quality of care is different. Even if you pay more for private healthcare the entire healthcare system is understaffed. This means they need more doctors, nurses, technicians, and more to help alleviate this issue. Becoming a nurse, doctor or physician is difficult to do in Paraguay because education is not accessible. The less accessible education is, the fewer workers join the healthcare system. "'About 15% of Paraguayan children suffer from malnutrition. That is if you do not count the children from indigenous groups. According to a United Nations estimate, if we include indigenous tribes, more than 45% of Paraguay children are at risk of hunger or malnutrition. But the problem is not lack of food. The problem here is poverty and lack of work and education. And housing is very precarious' (Borgen Project, 2020)." Infectious disease in Paraguay is affecting the workforce and the education available to citizens. The more disease spread the fewer people there are to be producers for the 7,197,575 people in Paraguay.

In the end, the healthcare system in Paraguay needs to make some changes. One change that can be made to help stop the spread of infectious diseases is making medications and medical supplies more readily available to citizens of the country. The country suffers from this issue because the government is not able to supply the necessary items to hospitals. One item that needs to be supplied to more citizens is vaccines. "Malnutrition and limited public health services, especially poor implementation of immunization programs, have led to thousands of preventable deaths, particularly in rural areas, where the health of residents is generally worse than that of their urban counterparts" (Britannica, 2021). There are people dying because they do not have access to the medications or vaccinations that they need to survive. Some of the very prevalent diseases in Paraguay are tuberculosis, measles, and hepatitis. All three of these diseases have vaccines to help protect against them. These vaccines could help prevent the deaths of many citizens in Paraguay. Currently, Paraguay has launched a campaign to intensify vaccination around its borders. These vaccinations are to help stop the spread of measles, yellow fever, and other diseases. This comes after an outbreak of yellow fever in the country. "Socorro Gross, PAHO/WHO Representative in Brazil, said vaccination is the most cost-effective health intervention, but it requires the commitment of politicians, mothers, fathers, health professionals, and all people" (Relief Web, 2019). Vaccinating the country is not just a matter of funding, resources, and supply, but also a matter of having the support of the people. Paraguay needs the support of politicians and higher-ups to encourage these changes. The government of Paraguay can also try working with bordering countries to help gain the medical supplies necessary to keep their hospitals running. The people of Paraguay need encouragement to know what to do in these situations. While some vaccines are available, citizens are either not getting them because they do not have good enough health insurance or they do not have the proper education to make a decision about vaccines. Simply just encouraging the citizens to get vaccinations is a way to help stop the spread of infectious diseases.

Other medical supplies are needed in the country to help stop the spread of infectious diseases in Paraguay. Some of these items are not being supplied to citizens because the payment system to suppliers needs to be fixed also. If suppliers are not being paid they will not give consumers the product, whether this is medical supplies or commercial items. That is just how society works. People in Paraguay are suffering because their healthcare system has portions that are broken down and need help being fixed or properly used.

Another method that Paraguay can implement to help stop the rapid spread of infectious disease is making health insurance more available. Right now approximately 73% of the country has no health insurance at all. Some of this stems from the price that health insurance is and the fact that families living on one euro a day can not afford it. One example of mostly free healthcare is in Canada. Canada has a decentralized, universal, publicly funded health system called Canadian Medicare. Health care is funded and administered primarily by the country's 13 provinces and territories. Each has its own insurance plan, and each receives cash assistance from the federal government on a per-capita basis (CommonWealth Fund, 2020) In Canada, citizens must apply for public healthcare and once they get this they do not have to pay for most healthcare services. Each Canadian province has its own plan to show the citizens what their insurance plan covers. Universal healthcare is paid for through taxes. Universal healthcare has been in place in all provinces of Canada since 1972. This came after the federal government passed an act in 1966. In order for provinces to use universal health care, there are standards put in place by federal legislation. These standards state that the healthcare will be publicly administered, comprehensive in coverage condition, universal, portable across provinces, and accessible. Another country that has implemented a very similar method is Brazil. In the country of Brazil there are two types of insurance, private and government. Government healthcare in Brazil has provided free healthcare to those in need. The Brazilian government resembles the same as the Paraguay government modeling more on how this

plan could work for Paraguay. The government also has multiple organizations in charge of overseeing this system. Canada's use of universal healthcare has helped ensure that citizens are not scared to go to the doctor due to medical costs. Instituting this method in Paraguay can help make sure that every citizen gets the medical care needed to stop the spread of infectious diseases and prevent any deaths they possibly can. Paraguayans would benefit greatly from having universal insurance because then citizens can be treated for medical issues without being worried about financial issues at the same time. Citizens should be able to focus on their health instead of finances. This plan could help Paraguayans get the help they need before it is too late. For instance, a person can go to the doctor and be treated before passing their disease onto many other people, supplying the citizens with the tools to help save their families and businesses. Paraguay needs to adopt a new plan to help save its citizens and their healthcare system.

The main idea is, the government of Paraguay must step up. The government needs to take action in order to help save their suffering country. As a government that can make plans with other countries to find a supplier of these medicines and other medical supplies. Another way that the Paraguayan government may be able to help is by implementing systems or bargains with other bordering countries or using ideas similar to what countries like them have done. One example of a similar country that Paraguay may benefit from using as a model is Brazil. The Brazilian government formulated a plan to ensure that their citizens have the healthcare that they need to survive. Paraguay too can make this happen.

Paraguay is struggling right now to keep its society safe from disease. They need help to form a better healthcare system and sustain that. There are many ways that the Paraguayan government can help itself but they need the help of citizens. They need more people to step up and create programs that will help citizens satisfy their medical needs. If the community of Paraguay comes together as one they will be able to make a great difference in their society and country. "There is no power for change greater than a community discovering what it cares about." - Margaret J. Wheatley

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