Whitney High School Model United Nations
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WHSMUN XX CONFERENCE
January 29, 2022

Advanced World Health Organization (WHO)

Antibacterial Resistance in Developing Countries

Chair Introductions

Head Chair

My name is Aman Shah, and I'm your Head Chair for this committee. I'm currently a senior, and I can truly say that MUN has been monumental in my life, being the reason for countless unforgettable experiences and long lasting friendships. Outside of MUN, I enjoy playing tennis, cooking desserts like cake or brownies, & binge watching Netflix. I hope that MUN has impacted, and will continue to impact, your life as much as it has impacted mine. See you all in committee at WHSMUN 2022!

Vice Chair

Hey delegates, my name is Matthew Fok, and I'm excited to be your Vice Chair for this committee! I'm currently a senior, and I've been part of MUN since 8th grade. Through all my years of doing MUN, I can truly say MUN is a great experience where you will encounter many memorable experiences and meet amazing people along the way. Outside of MUN, I enjoy swimming and participating in our high school's mock trial club. I wish everyone the best in their MUN endeavors, and I can't wait to see you all in action at WHSMUN 2022!

Legal

Hey everyone, my name is Kevin Thekkinedath and I'm excited to be your Legal for this committee! I'm currently a Sophomore and I've been part of MUN for around 3 years. So far, my MUN experience has been great despite part of it being online. Outside of MUN, I enjoy playing tennis and hanging out with my friends. I also am an Eagle Scout and help out the community with my Boy Scout Troop. I hope that you all have a great experience here like I did, and I can't wait to see you all in committee!

TOPIC BACKGROUND

Antibiotics are drugs that kill bacteria/microbes or stop them from reproducing. Today, antibiotics come in many forms, including tablets, creams and ointments. They help get an infection under control so the body's immune system can finish healing. However, antibiotics, one of the biggest breakthroughs in healthcare, are no longer a safe route for patients that need treatment. This is due to antibiotic resistance which occurs when bacteria can no longer be killed due to them no longer responding to medicines, making infections harder to treat and eventually rendering antibiotics ineffective. Consequently, infections become increasingly difficult or in some cases, impossible to treat.

Each year millions of people become infected with microbes that are resistant to the antibiotics that are prescribed. Almost half a million people die each year due to the fact that the bacteria are stronger than antibiotics. Since the microbes mutate to reduce or eliminate effectiveness of antibiotics, they continue to multiply and cause harm to the host. Bacteria that acquire resistance genes, whether by mutation or genetic exchange with other bacteria, have the ability to resist one or more antibiotics. Because microbes can collect multiple resistance traits over time, they can become unaffected by many different families of antibiotics. As a result, problems arise from the inability to have effective medicine.

Antibiotic resistant microbes can eventually weaken and become susceptible to antibiotics again, but this process often occurs very slowly. If the selective pressure is applied, the bacterial population can potentially revert to a population of bacteria that responds to antibiotics. In spite of that, countries across the globe prescribe unnecessary antibiotics that in turn make microbes stronger.

UNITED NATIONS INVOLVEMENT

Addressing antibiotic resistance is an important topic the UN focuses on since approximately 700,000 people die each year without proper medication. Leaders across the world met at the UN General Assembly in New York in September 2016 to talk about effects antimicrobial resistance has on patients. The UN has helped bring Global Antimicrobial Resistance Surveillance System (GLASS), Global Antibiotic Research and Development Partnership (GARDP), and Interagency Coordination Group on Antimicrobial Resistance (IACG). Together, they share data on improvement of existing antibiotics and acceleration of the entry of new antibiotic drugs. The UN has created more meetings and committees to tackle Antimicrobial Resistance (AMR) and provide recommendations on the global and national level. Currently, 85% of member countries are developing or have developed a plan to help stop the spread of antibiotic resistance.

Furthermore, Antimicrobial resistance continues to be a global health priority. At the fall 2018 UN General Assembly High-Level Meeting, there were side panels and sessions on this topic, including drug-resistant tuberculosis. A year-long campaign called the AMR Challenge, has commitments to accelerate combating antimicrobial resistance locally and globally.

BLOC POSITIONS

Western Bloc:

The Western Bloc is primarily composed of wealthy developed countries and has a high rate of

antibiotic use both in medicine and in livestock. This leads to high rates of antibiotic resistance. In the European Union alone, antimicrobial resistance is estimated to be responsible for 33,000 deaths per year and almost 1.5 billion euros in healthcare costs. A similar problem exists in the United States, where the CDC estimates that up to 50% of antibiotics prescribed in US hospitals are unnecessary. High rates in antibiotic use have inevitably led to the existence of antibiotic resistant bacteria, rendering many, previously curable diseases, as dangerous and harmful.

Latin America and Caribbean Bloc:

The Latin Bloc is more focused on ending the antibiotic resistance issues in their home countries. They wish to receive more help to add upon the 7 countries currently being aided by the EU.

African Bloc:

The African Bloc is not very focused on aiding their people in this matter. The government does not push for the research and surveillance on the effectiveness of certain antibiotics. They also do not have much support for the creation of solutions to either prevent infections or create new antibiotics.

Eastern European Bloc:

Resistance to antibiotics tends to fluctuate between different regions of Europe. Countries such as Poland in Eastern Europe had around 20.2 daily doses of antibiotics compared to the Netherlands in Northern Europe, which had around 10 daily doses of antibiotics. Southern European countries had an even higher number of daily antibiotic doses, with France having the highest rate at 32.2 daily doses. Thus, when compared to Northern and Southern European countries, Eastern European countries have an overall moderate usage of antibiotics. Variations in antibiotic use may be due to cultural differences, including beliefs about health and disease. People in Southern and Eastern European countries may possibly be more anxious about diseases than in northern Europe, which may make it more likely that they will consult a doctor and expect some drug treatment. Other possible factors of variation can include: drug reimbursement systems, availability of antibiotics over the counter, and marketing by drug companies.

Asia-Pacific Bloc:

The Asia-Pacific bloc is home to two-thirds of the world's population, with some of its countries industrializing and digitizing rapidly and others remaining the poorest countries in the world. As a result of this and the vast amount of antibiotics being prescribed, the region has become a hot spot for newly emerging antibiotic resistance. With a populace of over 1.3 billion people, China has one of the more severe epidemics of antibiotic resistance as one of the top consumers of antimicrobials in the world, while some of its less developed neighbors have little antibiotic usage at all.

QUESTIONS TO CONSIDER

1. What policies can be put into place that allows antibiotics to be used as necessary, but not overused to the point of resistance?

2. How are poorer communities within your country differently affected by antibiotic resistance compared to wealthier communities?

3. How will your country aid other countries that need support in creating solutions to prevent and stop antibiotic resistance?

4. What can be done to directly educate citizens about the dangers of antibiotic misuse and its effects during times of illness?

5. How does your country incentivize the development of antibiotics to keep up with antibiotic resistance?

WORKS CITED

1. "A Doctor Works to Spread Awareness and Stop Antibiotic Resistance in Armenia." World Health Organization, World Health Organization, 1 Nov. 2018, www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/personal stories/a-doctor-works-to-spread-awareness-and-stop-antibiotic-resistance-in-armenia.

2. "General Background: About Antibiotic Resistance." Index of /, emerald.tufts.edu/med/apua/about_issue/about_antibioticres.shtml.

3. Holloway, Kathleen Anne, et al. "The Impact of WHO Essential Medicines Policies on Inappropriate Use of Antibiotics." PLOS ONE, Public Library of Science, journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0152020.

4. "New Healthcare Regulation Requires Doctors' Prescriptions for Medicines in Armenia." The Armenian Weekly, 2 Mar. 2018, armenianweekly.com/2018/03/02/armenia-regulation-heathcare-otc-prescription/. 5. "Antibiotic Resistance." World Health Organization, World Health Organization, www.who.int/news-room/fact-sheets/detail/antibiotic-resistance.

5. Mayor, Susan. "Antibiotic Resistance Is Highest in South and East Europe." *BMJ : British Medical Journal*, vol. 330, no. 7488, 19 Feb. 2005, p. 383, www.ncbi.nlm.nih.gov/pmc/articles/PMC549142/.
6. Mayor, Susan. "Antibiotic Resistance Is Highest in South and East Europe." *BMJ : British Medical Journal*, vol. 330, no. 7488, 19 Feb. 2005, p. 383,