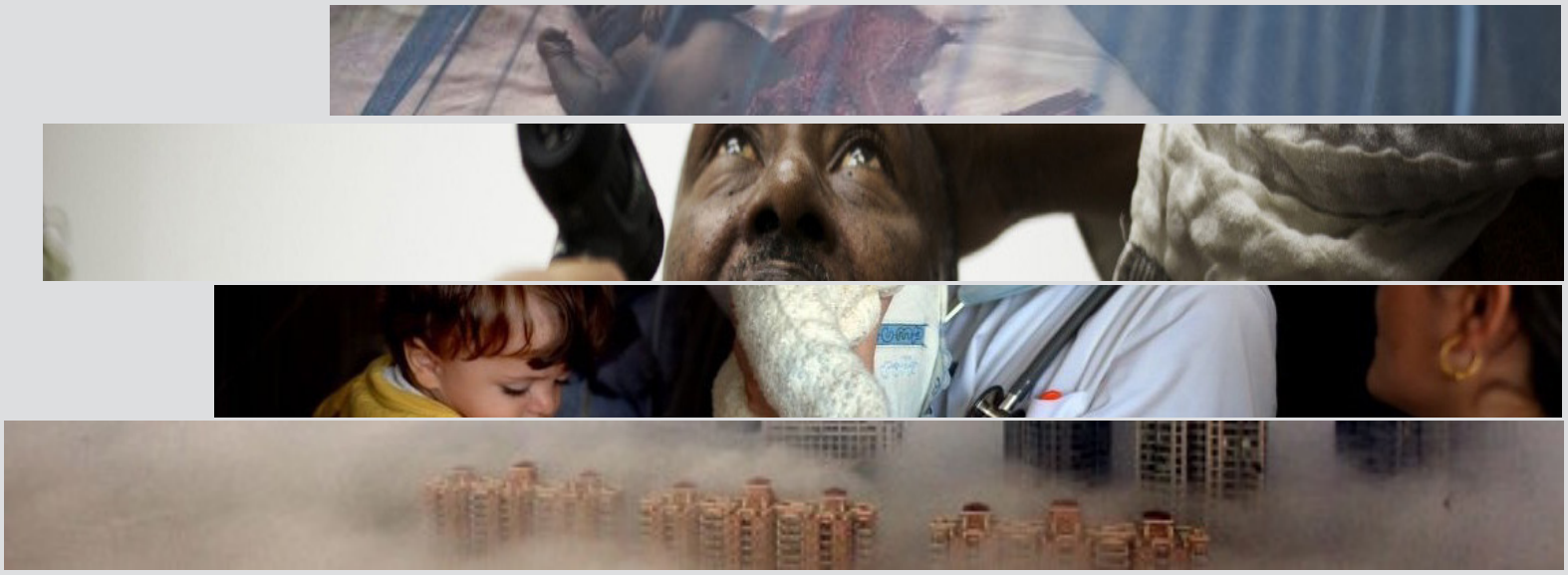
World Health Organization



Model United Nations at Illinois XXII

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Letter from the Director

Dear Delegates,

Welcome to MUNI and the World Health Organization! My name is Gordon Young and I will be the director for this committee. I am currently a freshman at the University of Illinois studying Political Science, and have done Model UN since my freshman year of high school. Outside of Model UN, I work as a camp counselor, am a member of a fraternity, and several volunteer organizations. My hope for all of you at MUNI is that all delegates, new and old, will step outside of the ir comfort zones and improve in at least one of the many life skills that Model UN gives us. To the newer delegates, I would like to see you all participate in committee and contribute what you can; you'd be surprised what you can do when you don't doubt yourself. To the experienced delegates, I would like to see you all be leaders in committee and work alongside diverse groups of delegates to further the committee. I am very excited for the conference and cannot wait to be in committee with all of you. If you have any questions or concerns about committee or the conference in general, please feel free to reach out to me at gjyoung2@illinois.edu . I wish you all the best of luck in preparing for the conference.

Gordon Young
Director, WHO

Letter from the Chair

Hello Delegates!

I'm so excited to welcome you all to MUNI XXII. My name is Vibha Pandurangi, and I will be your chair for the World Health Organization (WHO). I'm a freshman here at University of Illinois, studying Computer Science. This is my fourth year in Model UN and my first time staffing MUNI as a chair. I've been to MUNI as a delegate three times, and it was always one of my favorite conferences so I hope to make this experience as engaging and enjoyable as it was for me through my years as a delegate here. Model UN has helped me develop an international perspective on current events, strengthen my interpersonal skills, and make new friends.
I wish you all the best of luck in your preparations, and I am excited to meet you all during committee and see a wide latitude of debate on our topics. If you have any questions about MUNI, our committee, or University of Illinois, please don't hesitate to reach out to me at vibhap2@illinois.edu.
Thanks,

Vibha Pandurangi
Head Chair, WHO

Topic 1: Preventing the Spread of Disease in Developing Nations

Introduction

Despite the great successes that our world has seen in the advancement in medical technologies and information, billions of people worldwide still live in conditions where transmitting very lethal diseases is both very easy and life-threatening. Diseases such as Hepatitis B, HIV/AIDS, Cholera/E. Coli, HPV, and Malaria take the lives of millions of people in these places every year. Despite the lethality of these diseases, many of them are very curable or easily quarantined with proper technologies, resources, and protocols. They are spread often by unsanitary food and water sources, unprotected sex and blood exchanges, and through insects. In the past, the UN has made great strides to help lower the spread of diseases such as Malaria in Sub-Saharan Africa by providing resources such as mosquito nets. These resources have been proven to work; however, these diseases still cause havoc to the millions of people in these regions.

For our purposes in this committee, we will mainly focus on three main ways of disease spreading: food and water, mosquitoes, and infected bodily fluids. Rather than focusing on the specific diseases within these categories, the committee will work to draft resolutions that will put in place safeguards to help prevent major outbreaks. With the topics being this way, delegates will be forced to work together and form comprehensive solutions that cover the vagueness of each of the three topics.

Food and Waterborne Diseases

Overview

A variety of diseases can be spread through the means of food and water. Potentially lethal diseases such as Cholera, E. Coli, Schistosomiasis, Shigellosis, and even Ebola are spread through unclean food and water sources and are known to cause fatal outbreaks throughout the world. Many factors go into play that make this such a viable and easy way to cause outbreaks, including poor sanitation and sewage systems and contaminated water sources. Water-related diseases alone accounted for almost 80% of all illnesses and deaths in developing nations in 2003, according to the UN[1]. The struggle for safe and secure water sources is an issue that affects over 2 billion people worldwide everyday. The problem is made worse in regions prone to natural disasters and flooding, where infrastructure and clean water sources can be easily wiped out or made unusable.

[1] http://www.un.org/press/en/2003/sgsm8707.doc.htm

It is estimated that today nearly 2.4 billion people live in an area where they do not have access to a "safe toilet", meaning that whatever sewage and waste they produce poses an enormous risk to their water source. Sewage is the top contributor to contaminated water sources and poses the greatest risk, as many lethal diseases are spread through human waste. Along with this, runoff, or dirty water, produced through bathing, laundry, and food production poses a similar risk in these regions as it is often added back the water source, carrying bacteria and other illness causing agents.[2]

On a similar subject, disease spreads very easily in many of the same places through means of food and food production. Oftentimes, the culprit of these problems is related to the contaminated water that is used in the production and processing of food. Other times, however, diseases can be spread through contaminated foods, such as meat from sick animals. This, along with inadequate storage and transportation of meat, can spread diseases such as E. Coli (bacterial), Trichinellosis (parasitic), and Salmonella (bacterial) which can be lethal. It is also worth noting the great distances that many people, oftentimes women, have to travel in order to gain access to safe drinking water.

Solutions

In the past, the United Nations (through the means of organizations such as UNICEF, WHO, and OHCA), NGOs, and sovereign nations have all contributed great efforts towards introducing safe and reliable water sources to affected regions around the world. Along with this, many have taken action in introducing secure sanitation and waste management systems to many of these same regions in order to prevent further contamination of many water sources. Solutions such as the introduction of water filters, sanitation systems, and waste management systems have all shown great improvements in the areas where they have been implemented. For example, the United Nations, through the work of UNICEF, has helped to introduce water filters to many areas whose water sources have become contaminated, giving the people there access to safe water. In other situations, solutions such as waste sanitation and water purification systems have been introduced by prominent NGOs such as the Bill and Melinda Gates Foundation. The limitations on projects such as these, however, is the great cost to build and maintain this infrastructure. On a simpler note, easy solutions such as the development of wells that tap into already safe water sources have shown to be productive in areas where it is feasible.

As expected, this is not an easy issue to solve; if it was, it would be solved already. No two places are the same, making the implementation of a universal system impossible. It is because of this that research and development of effective projects are done at a local level. The

[2] http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/1_UN-Water_Annual_Report_2015_web.pdf

issue that many of these solutions also face are their impermanence. While these solutions work great when they are implemented, many of them require constant upkeep and do not last long. Many of them are not intended to be permanent solutions and are built in very minimalistic ways, making them only temporary solutions.

Helpful Links for Research

http://www.un.org/apps/news/story.asp?NewsID=35634#.WD8_kKIrJ-U

http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/1_UN-Water_Annual_Report_2015_web.pdf

http://www.who.int/water_sanitation_health/diseases/burden/en/

http://www.latlmes.com/world/waterborne-disease-spread-1

https://www.cabdirect.org/cabdirect/abstract/19732702172

Questions a Resolution Must Answer (Part 1 of 3)

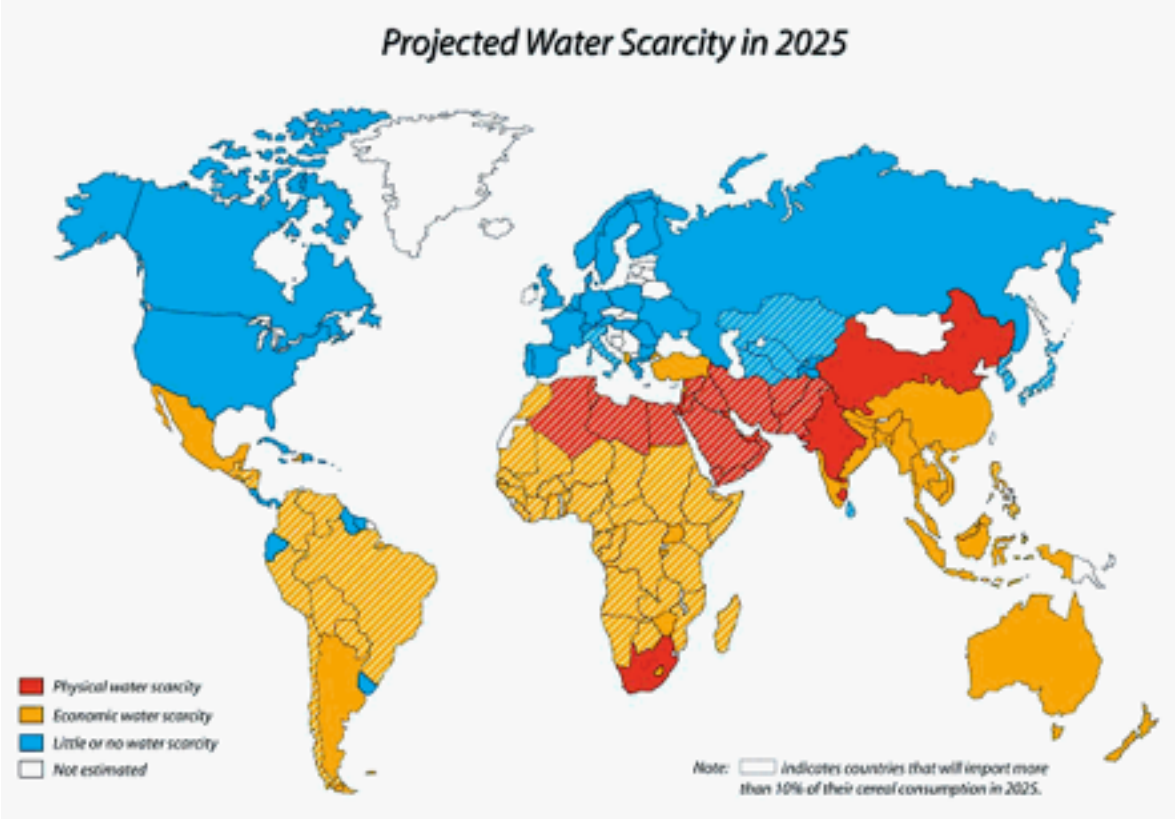
1. **How will solutions be addressed to areas at a local level, such that an effective solution is found?**
2. **How can WHO be prepared to act in the event of a contaminated water source?**
3. **How can WHO prevent the further contamination of water sources?**

Mosquito Spread Diseases

Overview

Mosquito borne diseases have been known to cause havoc throughout the world, most notably in sub-Saharan Africa, South America, and the Caribbean. Diseases such as Malaria, Dengue, and Yellow Fever have all within the past couple decades caused major outbreaks throughout these regions. These diseases are transferred when a mosquito bites an infected person and then an uninfected person, transmitting it through their saliva. The WHO predicts that almost 3.2 billion people, virtually half of the world's population, lives in an area where they are at risk for diseases of this type, most notably Malaria. The deadliest of these diseases is Malaria which infects about 214 million people every year and claims on average 438,000 deaths a year; 90% of all Malaria deaths happen in Africa alone.

Despite the risk that these diseases pose, the incidences of them have fallen significantly since the WHO and the UN have taken efforts to prevent the spread. Both infection rates and death rates fell by considerably high levels in a 15 year span, suggesting that the past progress that has been put in place has been effective, at least in some ways. Even with the disease rate



falling, the risk for a drastic outbreak is still a very real situation that many nations must be prepared for. Because of the very easy transmission methods these diseases pose a significant risk as the spreading factor is virtually impossible to control at times.

Solutions

Major outbreaks of these diseases are preventable with the use of simple technologies such as mosquito nets to help protect uninfected people from being bitten at the most vulnerable times, usually at night. On a smaller scale, antimalarial medications exist for short term use, mainly reserved for tourists and pregnant women. Despite this, the risk of outbreaks is still incredibly high in these areas. Year after year, organizations such as UNICEF and various NGOs contribute money and resources to help in the prevention of the spread, and for the most part their efforts have proven to be successful. The issue still remains, however, as mosquito nets alone cannot be entirely successful at preventing the spread of these diseases. Other methods of mosquito prevention can be successful, but, as a whole the issue still remains virtually unsolved as millions of people are still affected by these diseases yearly.

Questions a Resolution Must Answer (Part 2 of 3)

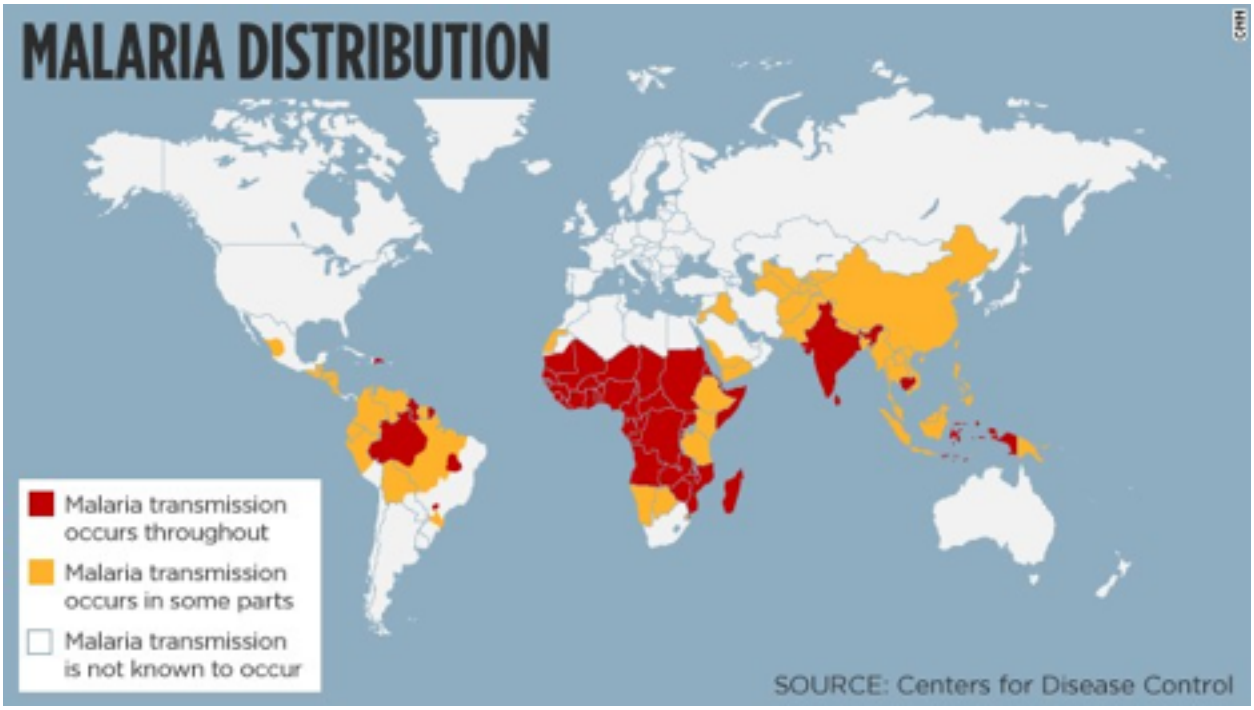
1. **How can existing technologies be utilized in order to solve the issue?**

2. **What can WHO do in order to help develop newer better technologies for the future?**
3. **What ways would WHO be able to help limit an outbreak of this sort if one were to occur?**

Diseases Spread Through Bodily Fluids

Overview

These types of diseases have, especially in recent years, caused a massive number of deaths across the world. It is a wide range of different diseases ranging from sexually transmitted diseases such as HIV/AIDS and syphilis to diseases that can be transmitted by basic contact with human fluids such as ebola. This is the easiest way of spreading disease because of the simple nature and frequency of bodily fluid exchanging. It is especially dangerous in developing nations because of the limited access to proper sewage, hand washing stations, and protective methods such as condoms and clean needles. This was especially potent in the 1990's where the AIDS epidemic hit an all time high worldwide.



In the past, methods such as needle exchanges and condom distributions have worked in many areas, but have shown less promise in many developing areas where people have a harder time gaining access to those resources. Because of this, the United Nations as a whole has made it one of its top priorities to try to help curb the spread of these diseases. As it stands today,

developing nations still face the worst of the reality that is the HIV/ AIDS epidemic. They lack the resources to properly prevent the spread and are often surrounded by conditions that make any progress on the fight against it nearly impossible.

Solutions

Though they are not able to work in all conditions, simple solutions such as needle exchanges and condom distributions have helped to limit the overall spread of these diseases. In these conditions, larger scale projects such as safer sewage systems have shown to help limit the spread. The problem with these however is that they often lack the durability to survive in the conditions where they are often needed the most.

Questions a Resolution Must Answer (Part 3 of 3)

- How can solutions that have worked in more developed areas be applied to developing areas?
- How can WHO partner with NGOs in order to combat the problem?
- What barriers stand in the way of practical application of a proposed solution?
- What can be done to overcome any potential barriers faced by a possible solution?

Topic 2: Health Conditions in Refugee Camps

Overview

The 1951 Refugee Convention states that refugees should enjoy access to health services equivalent to that of the host population, since everyone has the right under international law to the highest standards of physical and mental health. While the World Health Organization plays a direct role in guiding authority within the UN System in regards to international health, it also provides services and facilities to groups with special needs. In 1997 the WHO and United Nations High Commissioner for Refugees (UNHCR) agreed on a series of shared objectives which reduce the mortality, disease, and disability rates among refugees.

The continual rapid increase in the number of refugees throughout the world has led to the development of Migration Medicine, which aids in quickly addressing the public health needs of refugees. Among forcibly displaced populations in developing countries, the top five killers of children under the age of five are malaria, malnutrition, measles, diarrhea, and respiratory tract infections. With immunizations, nutritional support, and methods of reproductive health measures there can be a future with stabilized public health situations. Other diseases are often present due to the geographic location of refugee camps, close to international borders.

Resources

Most of the responsibility for implementing health services falls onto Nongovernmental Organizations (NGOs), and with the increasing involvement of district health authorities, there is a constant demand for accountability. However, most national information systems often do not have the ability to accommodate these changes and monitor the services offered within refugee settings. Refugee crises occur in very challenging environments, as these settings are rapidly evolving and any emergency health programs need to be established rapidly.

Challenges & Surveillance

Responding quickly and efficiently to the arrival of large groups of people requires coordination and effective collaboration between countries and sectors. Public health surveillance is:

The ongoing, systematic collection, analysis and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. The final link in the surveillance chain is the application of these data to prevention and control. A surveillance system includes a functional capacity for data collection, analysis and dissemination linked to public health programmes.

Allegra, D T, Nieburg, P I. Emergency refugee health care - A chronicle of experience in the Khmer assistance operation 1979-1980. CDC, Atlanta, GA, 1984: 1-191.

Without proper data collection, decision-making and determining health priorities becomes very difficult. In the emergency situations that refugee camps consist of, sudden changes in the environment of the camp can easily occur, both in the population itself and in health conditions. The need for quantitative data is imperative to further coherent communication between other UN agencies.

Possible Solutions:

Preventive Approach

Diseases originating in food and water are preventable yet frequently occur due to basic water, sanitation, and hygiene standards not being met. In refugee camps, these foodborne and waterborne diseases can attain epidemic proportions. The WHO's Five Keys to Safer Foods initiative can be implemented throughout to refugees, migrants, and the providers of food. Hand washing and cleaning water before drinking is critical for the prevention of food and waterborne diseases. Assessment of hygiene facilities within refugee camps by local authorities can help prevent poor hygiene and easily spreadable diseases such as cholera.

Immunizations

In situations such as the crowded settings and unhygienic conditions associated with refugee camps, infections can easily occur and spread. Vaccine preventable diseases can continue to spread due to refugees either opting out of immunization processes or because access to vaccination services is unreliable. The WHO Regional Office for Europe does not routinely collect information on vaccine preventable diseases among refugees. The 2015-2020 European Vaccination Plan has equitable access to vaccinations as one of the main objectives and ensures access for refugees.

Control of Communicable Diseases and Epidemics

Morbidity and mortality in refugee camps are primarily (51% to 95%) caused by measles, diarrheal diseases, malnutrition, malaria, and acute respiratory infections. These diseases are mainly caused by: refugees bringing the infection with them, the disease was present with the local population and refugees have not yet acquired immunity, or diseases surface in the camp due to poor sanitary conditions and overcrowding. The conditions of a refugee camp facilitate the spread of diseases but through preventive measures most of these risk factors can be reduced. Implementing basic health systems and having a good surveillance system to collect data regarding these diseases are essential for reducing mortality and preventing further spread of disease.

Looking Forward

United Nations High Commission on Refugees reports show that worldwide displacement has been hitting all-time highs as war and persecution increase. With half of all refugees being children, developmental concerns arise and the conversation surrounding public health changes. Looking from a global perspective it is important that more intersectional approaches are taken to integrate national and refugee health information systems. In order to achieve an overall increase in the public health standards within environments as challenging as refugee camps, it is required to look through basic health systems and maintain a good surveillance system.

Questions a Resolution Must Answer

- How will solutions be created to help the ever- growing refugee crisis?
- Is it possible to help people displaced in several countries with the help of organizations such as the UNHCR?
- With emergency kits, vaccinations, proper surveillance, and a global approach it is possible to assist in the control of diseases and improve the public health of refugee populations?

Helpful Links

- http://www.unhcr.org/pages/49c3646cdd.html
- http://www.unhcr.org/pages/49fea7cd6.html
- http://www.ncbi.nlm.nih.gov/pubmed/1861262
- http://www.unhcr.org/pages/49c3646cdd.html
- http://www.who.int/bulletin/volumes/88/10/09-074096/en/

Topic 3: Air Pollution

Overview

Clean air is considered a basic requirement of human health; however, air pollution continues to pose a significant threat to health on a global scale. Outdoor air pollution is a pressing issue for the global community as pollution is present across the globe. The people who are primarily affected by increased levels of air pollution reside in urban areas, often in third world countries, although every single person is affected by the air quality in their environment.

According to WHO estimates of the magnitude of disease prevalence due to air pollution, more than two million premature deaths each year can be attributed to the effects of urban air pollution. Over half of these deaths are people in developing nations and nations without air quality regulations. Adults can breathe close to 3,000 gallons of air each day, but adolescents are far more prone to adverse effects from exposure to air pollution because they breathe more air per pound of body weight than adults. In first through third world countries, the largest contributors to urban outdoor air pollution include: motor transportation, manufacturers and other industrial plants, burning of biomass, coal, and other natural resources for cooking and heating, along with coal-fired power plants.

Current Problems

Industries, households, cars, and trucks emit complex mixtures of air pollutants, many of which are harmful to health. Of all of these pollutants, fine particulate matter has the greatest effect on human health. Most fine particulate matter comes from fuel combustion, both from mobile sources such as vehicles and from stationary sources such as power plants, factories, households, or biomass burning. Fine particulate matter is associated with a broad spectrum of acute and chronic illnesses, such as lung cancer and cardiopulmonary disease. Worldwide, particulate matter pollution causes about 9% of lung cancer deaths, 5% of cardiopulmonary deaths, and 1% of respiratory infection deaths. Particulate matter pollution is an environmental health problem that affects people worldwide, but middle and lower-income countries disproportionately experience this burden.

Automobile emissions are another leading cause of outdoor urban air pollution. Carbon monoxide is one of the main pollutants released by motor vehicles that contribute to the air quality. As the chemical is inhaled from the air and enters the bloodstream, it inhibits oxygen from being delivered properly throughout the body. This can cause death if a person is exposed to a heavy dose, but even lower amounts of carbon monoxide can have adverse effects such as dizziness, fatigue, and headaches. Carbon monoxide levels are above WHO guidelines in almost half of the 20 largest cities in the world, including New York City, Los Angeles, Mexico City, Cairo, and Sao Paulo, according to a joint study by United Nations Environment Program (UNEP) and WHO.

As factors like population density and industrial presence have increased, so too have levels of air pollution, particularly in urban areas. Too few countries have the proper regulations to fit their local industries and regulate the emissions coming from them along with the other various sources. As air quality levels throughout the world worsen, the instances of sickness caused by pollution will dramatically increase. To combat this, nations must regulate the major sources of pollutants that are present within their borders, and caps must be set on the levels of specific toxins that can be put into the air.

Looking Forward

WHO's main goal regarding the topic of air pollution is to increase awareness of health risks due to the issue. In addition, the implementation of effective policies and the close monitoring of pollutant levels in cities across the globe is a top priority. The WHO Coordinator for Interventions for Health Environments in the Department of Public Health and Environment, Dr. Carlos Dora, also notes the importance of varying standards depending on specific circumstances.

Generally, there are two types of air quality standards that are used for regulation. The first class of standards, including the U.S. National Ambient Air Quality Standards and E.U. Air Quality Directive, set maximum atmospheric concentrations for specific pollutants. Environmental agencies have also enacted regulations intended to move towards reaching the target levels. The second class of standards, including the North American Air Quality Index, take the form of a scale with various thresholds, which is used to communicate to the public the relative risk of outdoor activity.

Questions A Resolution Must Answer

- What are the levels of exposure to particulate matter and other pollutants present within your nation?
- What regulations (if any) has your country put in place regarding air quality standards?
- What air quality initiatives has your country implemented or signed on to?
- What steps is your country taking to improve/address air quality standards within your nation?
- How many deaths related to air quality occur within your country?
- What can be done to lower the instances of pollution-related illnesses and deaths throughout the world?
- What measures can be taken on national and global levels to address the increasing levels of air pollution globally?
- What can WHO do to help the issue?