

Strengthening Global Health

MIDDLE SCHOOL READINGS

The world is more interconnected than ever before. A student in Shanghai, China can easily and instantly communicate with a student in Houston, Texas via text message, Zoom or FaceTime. People and products are able to travel across the world on planes, ships and cars. This interconnectedness also facilitates the spread of disease.

Human populations have grown very fast over the last 200 years and, in some parts of the world, this growth has outpaced the ability for countries to setup, maintain and provide adequate health care systems for its residents. As a result, the lack of proper sanitation, along with water and air pollution, contribute to poor health outcomes.

The way humans change the land and environment also affect public health. In order to meet the growing demand for food, animal protein and timber, humans continue to clear cut forests, bringing us closer to wildlife and the diseases they transmit. A warming climate aids the spread and range of certain disease-carrying insects, like mosquitoes. The current COVID-19 pandemic has shown the world the need to strengthen global health and emergency response in order limit the impact of disease on humans.

Access to health care

We all need to regularly visit a health care provider in order to ensure that we're growing healthy and strong and, sometimes, to seek help in emergency situations. Regular health care visits also make sure that people, especially children, receive important, lifesaving vaccines to prevent diseases like polio,



[CDC.](#)

measles and tetanus.¹ Unfortunately, [many people around the world lack access to health care services.](#) This can be for a number of reasons such as [living in remote areas far from health facilities, or only having access to health systems that are outdated or understaffed.](#)

In some cases, people are unable to access health care because it is too expensive and they must make the difficult choice to go without it in order to meet other needs. In other parts of the world there aren't enough trained health care providers to meet the needs of the population and infrastructure challenges (like poor roads or a lack of running water or electricity) make it difficult to set up proper health care facilities. The current COVID-19 pandemic highlights the need to invest globally in adequate health care and health care systems to ensure that all people have access to quality health care. What ideas do you have for making health care available in rural areas? How can health care take into consideration the culture and needs of diverse populations? [Why is a healthy population important?](#)

¹ See Reference

Pandemics and emergency response

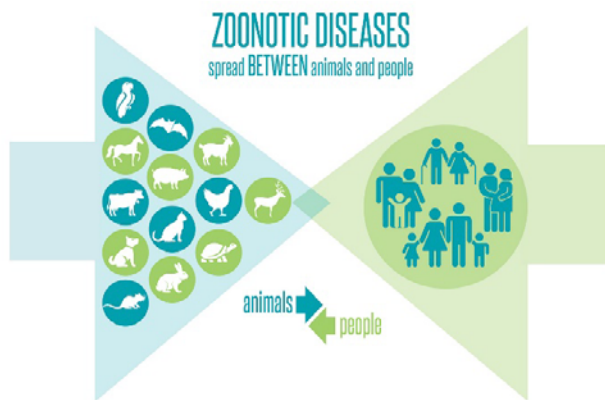
On March 11, 2020 the World Health Organization declared that the coronavirus (COVID-19) had reached pandemic status, meaning that the virus had spread all over the world. Since the onset of the pandemic, health care systems around the world have experienced a **surge in patients, and many have become overwhelmed and lack resources and health care workers.** COVID-19 has shown the world the need to invest more time, money and resources in emergency response strategies. Pandemic emergency response plans require global cooperation between countries and world leaders.

In order to track where and how disease is spreading, governments use **surveillance systems** before and after disease outbreaks. Another important component in an emergency response is understanding how many people are sick. This requires testing to inform policies and actions such as mask wearing or social distancing. As we learn more about the disease, governments must be able to properly communicate findings and health guidelines to the public. **Health literacy**, or the extent to which people understand health information, varies by community, region, and country, so messaging strategies should take this into consideration. In a highly interconnected world where, **as of 2018, 55% of the world's population lives in urban areas** (expected to increase to 68% by 2050), disease can spread quickly, what should governments be doing to prepare for pandemics and disease outbreaks?

Check out this **TedEd talk on how pandemics spread and what we can do to stop future outbreaks.**

Disease spread (zoonotic and vector-borne)

Zoonotic diseases are diseases or infections that are transmissible from animals to humans. Humans all over the world interact with animals on a daily basis. Some people live very close to wildlife and others come into contact with pets or wild animals while traveling, and some people come into contact with animals through the trade (often illegal) of exotic animals. Zoonotic diseases are transmitted to humans through direct contact (animal saliva or blood) or by indirect contact (animal habitats).



The demand for food, animal protein and timber is increasing with population growth and rising affluence. This demand has led to increased deforestation as farmers need to clear more land for agriculture and cattle ranchers need more land for grazing.

Deforestation is harmful to the environment, contributes to climate change and has been associated with disease spread. By clearing land, **humans are encroaching on different wildlife habitats and increasing the likelihood of human-wildlife interaction.**

Disease can also spread through vectors such as mosquitoes, ticks and fleas. Vector-borne diseases account for more than 17% of all infectious diseases and cause more than 700,000 deaths each year.² Climate change is driving the north and southward spread of warm, tropical, climate zones. This enables vectors to thrive in areas where they previously have been unable to live.

Maternal Health

When women have access to quality health care and proper nutrition they can lead healthier lives and give birth to healthier babies. Pregnancy is a time in a women's life when nutrition and reliable access to quality health care is critical and leads to lower maternal and infant death rates. In 2017, the World Health Organization estimated that 810 women died every day from preventable causes related to pregnancy and childbirth.³ The health care solutions to prevent or manage many of the complications that lead to maternal deaths are well known. Despite this, many women are not receiving the care that they need and this disproportionately affects women in remote and poorer regions where health

care systems are non-existent or inadequate.



For the best health outcomes, women need to have access to the full range of reproductive health services so that they can prevent unwanted pregnancies and ensure safe deliveries and healthy babies. Skilled delivery attendants (doctors, nurses or midwives) are also needed for safe delivery and to help when complications from delivery

arise. **The current COVID-19 pandemic poses a threat to the progress of the Sustainable Development Goals, including the progress made in maternal health.** The pandemic has caused a shortage of health workers, supplies and equipment. It has also sparked a surge in demand for health services.

2 Vector-borne diseases. (2020, March 2). Retrieved August 27, 2020

3 Maternal mortality. (2019, September 19). Retrieved August 27, 2020

Sanitation

Globally, 2.2 billion people lack safe drinking water and 4.2 billion people lack basic sanitation services to safely dispose of human waste. Although global industrialization has led to improvements in standards of living, it has also contributed to uneven development around the world, so that **some countries have better developed infrastructure than others** for providing people with clean water and well-managed sewage systems.

Strong sanitation and hygiene practices, like handwashing and disinfecting surfaces, are essential in stopping the spread of disease. Those who live in crowded conditions without access to clean water, or who lack access to hot water and soap are most at risk during the current COVID-19 pandemic. Nearly 40% of healthcare facilities in low- and middle-income countries lack a water source, **one in five do not have adequate sanitation**, and over one third do not have soap and water for handwashing.

Poor sanitation can also contribute to antibiotic resistance by leading to infections and a greater use of antibiotics to treat them. **Water-borne diseases** such as cholera and typhoid fever are also linked to poor sanitation. As populations increase, local and national governments will have to consider how



Sustainable Development Goal 6

to ensure proper sanitation for all. What strategies can governments use to ensure proper sanitation for communities? Are some communities at higher risk for disease because of a lack of sanitation? How does crowding and poverty increase the risk of disease?

Health Effects of Environmental Pollution

Environmental pollution, or contamination, can enter an ecosystem in many ways. Contamination can be introduced into [rivers and streams](#) from industrial practices such as coal-fired power plants, nutrient runoff from farms, or trash from landfills. The [sky and air can become contaminated](#) by car exhaust fumes, power plant emissions or forest fires. Land and soil can become polluted from improper waste management and harmful fossil fuel extraction practices. All of these environmental contaminants pose a threat to human health.

According to the World Health Organization, ambient (outdoor) air pollution is linked to an estimated 4.2 million premature deaths globally. The burden of air pollution-related illness is unequal within and across countries. People in low- and middle-income



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countries and poor populations tend to live near busy roads and industrial sites where high levels of ambient air pollution exist.⁴ Fossil fuel extraction to produce energy can have serious impacts on environmental and human health. Fracking, or hydraulic fracturing, is a method of drilling gas that [pollutes water and air](#). Fracking has been associated with a number of [health impacts including, respiratory problems and birth defects](#).

A recent study by UNICEF and PurEarth revealed that [one-third of the world's children have blood lead levels that exceed the acceptable amount](#). This is caused by industrial pollution and improper lead battery recycling in low and middle-income countries. As the world's population grows so does the demand for cars, energy, and the need to develop infrastructure. How should cities, countries, and governments balance human health with environmental pollution?

4 Ambient air pollution: Health impacts. (2018, September 25). Retrieved August 27, 2020