NO PREP

Disease and Global Health

Geography of Epidemics and Recovery

Includes: Student reading, case study, differentiated questions, teacher key

Name: Period: Date:

Disease and Global Health: Geography of Epidemics and Recovery

The Geography of Disease

Health is deeply connected to geography. Where people live influences the diseases they are exposed to, how they spread, and what resources are available for treatment. Throughout history, disease has shaped societies as much as wars or politics. The Black Death in 14th-century Europe killed millions, altering economies and shifting labor patterns. In the 20th century, influenza outbreaks spread quickly along global

Name: **Period:** **Date:**

Disease and Global Health: Geography of Epidemics and Recovery

The Geography of Disease

Health is deeply connected to geography. Where people live influences the diseases they are exposed to, how they spread, and what resources are available for treatment. Throughout history, disease has shaped societies as much as wars or politics. The Black Death in 14th-century Europe killed millions, altering economies and shifting labor patterns. In the 20th century, influenza outbreaks spread quickly along global trade and travel networks, showing how geography and mobility combine to create risk. Today, diseases move even faster. Air travel means a virus can cross continents in hours. The 2014 Ebola outbreak in West Africa revealed how diseases can overwhelm weak health systems, while the COVID-19 pandemic demonstrated the interconnectedness of the modern world. Geography explains not only how diseases spread but also why certain regions are more vulnerable. Climate, population density, poverty, and access to clean water all influence health outcomes. Some diseases are endemic, meaning they remain in a region permanently. Malaria, for example, persists in tropical areas of Africa and Asia because of warm climates and mosquito habitats. Other diseases are epidemics (local outbreaks) or pandemics (global outbreaks), such as HIV/AIDS or COVID-19. Understanding the geography of disease helps explain how environment, human movement, and inequality shape global health challenges.

Global Health Inequality

Not all regions experience disease the same way. Access to healthcare, sanitation, and nutrition varies widely. Wealthier nations often have advanced hospitals and vaccines, while poorer regions struggle with shortages of doctors, medicine, and

clean water. This creates what the World Health Organization calls "health inequities." For example, Africa carries a heavy burden of diseases like malaria, tuberculosis, and HIV/AIDS. Many of these illnesses are preventable or treatable but persist because of poverty, limited infrastructure, and political instability. In contrast, wealthier countries face "lifestyle diseases" such as diabetes, heart disease, and cancer, often linked to diet and sedentary lifestyles. Geography plays a role: urban areas may expose people to air pollution, while rural areas might lack healthcare facilities. Global health also highlights the importance of international cooperation. Organizations like the WHO, Doctors Without Borders, and UNICEF provide vaccines, aid, and health education. Global initiatives such as the eradication of smallpox in 1980 show that cooperation can work. However, unequal vaccine access during the COVID-19 pandemic revealed ongoing disparities. The question of who receives treatment first often reflects global power structures more than medical need.

Disease, Technology, and the Future

The fight against disease increasingly relies on technology. Innovations such as mRNA vaccines, digital contact tracing, and artificial intelligence for predicting outbreaks demonstrate how modern tools can save lives. Yet these technologies raise questions about privacy, access, and ethics. Will only wealthy nations benefit, or can new systems be shared more equitably? Climate change may also expand the geography of disease. As temperatures rise, mosquitoes carrying malaria or dengue fever may spread into new regions. Melting ice could even release ancient pathogens. The geography of global health will continue to evolve, shaped by human choices as much as natural forces. Disease is both a local and global issue. Understanding its geography helps explain why some regions are hit harder and why solutions must be global in scope. The challenge for the future is not only to fight diseases but to ensure that all people—regardless of where they live—have the right to health and safety.

Key Information

Disease/Issue	Region Most Affected	Geographic Factors
Malaria	Sub-Saharan Africa	Warm, wet climates; mosquito habitats
HIV/AIDS	Africa, worldwide	Poverty, lack of healthcare access
COVID-19	Global	Air travel, dense cities, global trade
Diabetes	Wealthy nations	Diet, lifestyle, aging populations
Tuberculosis	Asia, Africa	Crowded housing, weak health systems

Case Study Excerpt: The COVID-19 Pandemic

The COVID-19 pandemic began in late 2019 and spread across the globe with unprecedented speed. Within months, nearly every country reported cases. Geography played a critical role in shaping its spread and impact. Major cities with international airports, such as New York, London, and Milan, became hotspots early in the crisis because of global travel. Population density worsened transmission in urban centers, while rural areas sometimes experienced outbreaks later but struggled with fewer hospitals and medical staff. Responses also varied by geography. Countries like New Zealand and South Korea implemented strict border controls and aggressive testing, successfully limiting cases early on. In contrast, some nations delayed action or lacked resources, leading to higher death tolls. The pandemic also revealed inequalities: wealthy nations secured vaccine supplies quickly, while poorer countries often waited months or years for access. This "vaccine divide" deepened existing health disparities. The pandemic was more than a health crisis—it disrupted economies, education, and political systems. Lockdowns highlighted the dependence on global supply chains, as shortages of medical equipment, food, and even computer chips spread across borders. Remote learning and remote work reshaped education and employment, creating new opportunities for some while leaving others behind. The geography of COVID-19 shows that in a globalized world, disease is not only a medical issue but also a social, economic, and political challenge.

1. How did geography influence where COVID-19 spread most quickly?

2. What does the COVID-19 pandemic reveal about inequality in global health systems?

Multiple Choice

1. Which disease is considered endemic to tropical Africa and Asia?

    a) Malaria

    b) Tuberculosis

    c) Influenza

    d) Diabetes

2. Which organization played a leading role in eradicating smallpox?

    a) United Nations

    b) Doctors Without Borders

    c) World Bank

    d) World Health Organization

3. What global challenge was revealed during COVID-19 vaccine distribution?

    a) Too few people wanting vaccines

    b) Unequal access between nations

    c) Resistance to remote work

    d) Overproduction of vaccines

Matching

Write the letter of the correct definition on the line next to each term.

Term	Definition
1. ___ Malaria	A) Began in late 2019 and spread globally via air travel in early 2020
2. ___ COVID-19	B) Linked to climate and mosquito habitats
3. ___ HIV/AIDS	C) Lifestyle disease in wealthy nations
4. ___ Tuberculosis	D) Preventable but persists in poor regions
5. ___ Diabetes	E) Crowded housing, weak health systems

Fill-in-the-Blank

1. The eradication of _____ in 1980 was a global health success story.

2. The _____ divide refers to unequal vaccine access across countries.

3. Diseases that remain permanently in a region are called _____.

Short Answer

Answer each question in 2-4 complete sentences.

1. How do population density and travel networks shape the spread of disease?

_____

_____

_____

2. Why do some diseases persist in poorer regions even though they are preventable?

_____

_____

_____

3. How did the COVID-19 pandemic reshape daily life beyond health concerns?

_____

_____

_____