IBUCS 2010
Committee: World Health Organization
Topic: Responding to Global Epidemics

Introduction

A communicable disease is one that spreads from human to human through contact, usually causing infection. These infectious diseases are caused by microorganisms like viruses and bacteria, also called pathogens. When an infectious disease spreads quickly through a population, infecting many people, this constitutes an epidemic. When a disease spreads into many regions of the world and infects large numbers of people, it causes a pandemic; pandemics are most likely to occur if the disease is new and if it spreads very easily among people.

It is vital that countries, international organizations and local officials are prepared in the event that an infectious disease begins to spread quickly. With action plans in place, health officials will be better prepared to hinder an epidemic and preventing it from infecting more people. Not only do epidemics and pandemics cause fatalities, but they can disrupt economic activities such as travel and trade, putting a serious strain on economic development.

History of the Problem

Epidemics put a huge strain on health systems and force health systems and countries to devote huge amounts of resources to fighting them. When an epidemic occurs in a country without a stable and structured health system, it makes conditions worse by using the few available health resources.

Trade and travel may also be damaged in the event of an epidemic, as a country may try to restrict people's movement. Countries might refuse to admit people into their borders from regions where an epidemic is occurring and halt visa acceptances. International shipments of

products can also be halted. Provision of goods and services within a single country might even be slowed or stopped in the event of a serious epidemic threat. In addition to straining on national and international economic systems, epidemics are harmful to development because they require money and resources from other public health and development projects.

Although the virus cannot be spread through casual contact, the HIV/AIDS pandemic is considered one of the worst in history. Since its appearance in 1981, AIDS has claimed the lives of over 25 million people - approximately 40 million people are currently living with HIV/AIDS. According to the UN, HIV/AIDS "threatens development, social cohesion, political stability, food security, and life expectancy and imposes a devastating economic burden that requires urgent action.

Past Actions Taken

As part of its global alert and response system, WHO gathers epidemic intelligence, which is information about suspected disease outbreaks. Besides official reports from a country's health ministry, reports on disease outbreaks also come from WHO country offices, laboratories, academic institutions and nongovernmental organizations. But often, informal sources yield even more information. More than 60 percent of epidemic intelligence comes from these informal, unofficial reports, which must then be verified by WHO officials.

The first step in stopping a potential epidemic is to recognize the spread of an infectious disease. For some highly infectious diseases, the existence of a single case is significant. For other diseases that are more common, health experts look for a pattern that shows that the disease is spreading to large numbers within a population - a sign that an epidemic may be starting. The next step after the gathering of epidemic intelligence is event verification. In this case, an "event" might be a single reported case of a rare disease, or the spread of an epidemic-prone

disease from one location to another. Officials must confirm the event actually took place and determine whether the outbreak is a cause for international concern.

There are six criteria used to determine whether a reported disease is truly a cause for international concern. A disease is treated as a serious threat is:

1. it is a previously unknown disease;
2. it has the potential to spread beyond national borders;
3. if it is causing an unusually high illness or death rate;
4. if it might potentially interfere with international travel or trade;
5. if the country where the disease outbreak is taking place does not have the capacity to contain the outbreak on its own; or
6. if there is suspicion that the disease was released on purpose, or released accidentally from a lab.

If it is confirmed and believed to be a threat, the next step is to get information to the health professionals who need it, so that they can take appropriate action. The event goes onto a list called the WHO Outbreak Verification List which provides public health professionals with real-time alerts and information on possible and confirmed disease outbreaks. WHO also maintains a news service called Disease Outbreak News, which provides information to the public about diseases of international importance. The goal of these and other information management efforts is to make sure that infectious disease outbreaks get the necessary attention. At the same time, WHO must make sure that the threat is well-understood so that no inappropriate or excessive actions are taken and panic does not break out.

Questions to Consider

1. Which infectious diseases are most prevalent in your country?

2. Is an infectious disease epidemic a major concern for your country?

3. Has your country ever experienced an epidemic? If so, what effect did it have?

4. Is there a strong health system in your country?

5. What measures has your country's government taken to address the threat of avian/swine influenza, etc, and other potential epidemics? Are these measures applicable elsewhere?