

Bioterrorism Awareness

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In a changing world, we must be ready for any emergency. Since the event of the World Trade Center on September 11, 2001, we know that terrorism is possible anywhere.

Terrorism can be defined as politically motivated, premeditated violence against civilians by radical groups. Bioterrorism is the use of infectious disease agents or toxins as weapons of terror.

The Centers for Disease Control and Disease Prevention (CDC) groups germs that could be used as weapons of terror into three categories. Category A agents are those that are easily disseminated and could cause high mortality and massive social disruption and panic. They include agents like anthrax, plague and smallpox.

Category B agents can be moderately easy to disseminate and may produce moderate rates of disease and low mortality. Category B agents include typhus fever, food safety threats (such as salmonella, E coli), and the toxin from staphylococcus bacteria.

Category C agents include newly identified disease agents that could be engineered for mass dissemination in the future. These have the potential for both high morbidity and mortality. Nipah and hanta viruses are category C agents.

Germ agents are attractive weapons for a number of reasons. Many types of bacteria that cause disease are readily available from medical supply companies and are common in medical, hospital and university labs. Once obtained they can be manufactured very easily with equipment purchased from medical and lab supply companies. The knowledge and skill necessary to do this is taught in college introductory microbiology courses. Once produced, germ agents can easily and discreetly be disseminated. Food, water or a building ventilation system could be used to expose victims. Some of these agents have considerable destructive power in causing illness and death.

Germ agents have been used a number of times on U.S. citizens. In 1984, an Oregon religious cult, the Rajneshees, contaminated ten restaurant salad bars. Seven hundred and fifty-one people became ill, but, fortunately, none died. The most notorious use of a disease agent was the anthrax letters of September 2001. Four letters containing up to a gram of anthrax spores were mailed from a neighborhood mailbox in New Jersey. Twenty-three people were infected and five died. The person(s) responsible have not been caught.

A source of these agents are the people and resources involved in military production of germ weapons. Many countries have developed extensive germ warfare programs over the last several decades. Access to these weapons is a major reason for the concern about their use by terrorists.

The former Soviet Union had the largest program. Germ weapons were produced in more than 100 sites. Over 80 biological agents were studied including tularemia, plague, anthrax, smallpox, encephalitis viruses and viral hemorrhagic fevers. Thousands of tons of these agents were produced. This mostly ended after the fall of the Soviet Union. But, there is great concern about the fate of the 120 different stocks of smallpox that were maintained. Many scientists and technicians involved in this work lost their jobs following the collapse of the Soviet Union. Many experts fear they may sell their expertise to "rogue" states or terrorist groups trying to acquire germ weapons.

It is hard to predict if or when germ agents might be used against U.S. citizens. But the potential ease of use and devastating effects make the threat real enough to be prepared.

Because a bioterrorist attack could have rapid widespread effects, plans and programs must be evaluated and put in place. A surveillance system that could pick up an attack as early as possible is very important. Training and education should be on-going for first responders, medical and public health professionals.

The ANTHC Division of Community Health Services/Emergency Preparedness Program works with several State agencies in planning coordinated efforts to all hazards that could be threats to the Nation and Alaska.

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