

## The Physician's Role in Recognizing a Bioterrorism Event

In light of recent terrorist activities, concerns have been heightened regarding the possibility of bioterrorism (BT) attacks occurring in the United States. Physicians, emergency room personnel, emergency medical technicians, and infection control practitioners will be the "Early Recognizers" of a BT event. Early detection of illness caused by BT will save countless lives since the sooner a BT incident is detected the sooner control measures can be implemented.

BT is defined as the overt or covert dispensing of disease pathogens into the civilian population, for the purpose of causing morbidity and mortality or instilling fear. Biological weapons are relatively easy and cheap to make and include both living microorganisms and biological toxins.

The Centers for Disease Control and Prevention (CDC) has defined three categories of high priority agents that pose a risk to national security (Box 1). Category A agents are highest priority because they: a) can be easily disseminated or transmitted person-to-person; b) cause high mortality, with potential for major health impact; c) might cause panic and social disruption; and d) require special action for public health preparedness. Category B agents are the next highest priority, followed by Category C agents.

The first cases resulting from a BT attack are likely to be detected by an astute clinician in an emergency department or primary care setting. ***Early detection by such clinicians and rapid reporting to the Clark County Health District will be critical in minimizing the impact of an attack.***

Box 2 gives warning signs of a potential BT incident. Observations of any unusual clinical presentation should prompt an immediate call to the Office of Epidemiology whether or not BT is suspected. Health care providers are required by Nevada Revised Statutes (Chapter 441A) to report any "extraordinary occurrence of illness."

### Box 1. Potential Bioterrorism Agents

Category A Agents
<i>Bacillus anthracis</i> (Anthrax)
<i>Clostridium botulinum</i> (Botulism)
Hemorrhagic fever viruses (Venezuelan Equine Encephalitis, Ebola, Marburg, Lassa Fever)
<i>Yersinia pestis</i> (Plague)
Variola major (Smallpox)
<i>Francisella tularensis</i> (Tuleremia)
Category B Agents
<i>Coxiella burnetti</i> (Q Fever)
<i>Brucella</i> species (Brucellosis)
<i>Burkholderia mallei</i> (Glanders)
Ricin toxin <i>Ricinus communis</i> (from Castor Bean)
Epsilon toxin of <i>Clostridium perfringens</i>
Staphylococcal enterotoxin B
Category C Agents
Nipah virus
Hantaviruses
Tickborne hemorrhagic fever viruses
Tickborne encephalitis viruses
Yellow fever
Multi-drug resistant Tuberculosis

When the Office of Epidemiology receives a report of a possible communicable disease outbreak or unusual occurrence of disease, an epidemiological investigation is initiated to determine the source and extent of the outbreak and to identify the pathogen. The medical community is alerted as necessary and control measures are implemented whenever possible.

Since most American physicians have never seen the clinical manifestation of potential BT agents, it is important that medical care providers familiarize themselves with signs and symptoms caused by these organisms. During the coming months, the Office of Epidemiology (OOE) will be adding a BT section to our website. Fact Sheets on the various diseases will ...*(continued)*

be available on our website at [www.cchd.org/epidemiology.htm](http://www.cchd.org/epidemiology.htm). Additional BT information is available at the CDC site at [www.bt.cdc.gov](http://www.bt.cdc.gov). The U.S. Army Medical Management of Biological Casualties at [www.nbc-med.org](http://www.nbc-med.org) contains more detailed medical information.

The OOE has recently initiated a Bioterrorism Preparedness Training Program (BPTP). Beginning in January 2002, Ms. Sunny Lucia, the Program Coordinator, will be conducting two-hour medical education programs. The Southern Area Health Education Center is contracted to schedule training. Call Karen Seale, Education Program Manager, at 318-8452 if you are interested in scheduling a training session. For further information about the BPTP, contact Sunny Lucia at 383-1378.

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**Box 2. When to Suspect Bioterrorism**

**Who?**  
 Atypical hosts: young, immunologically intact, no underlying illness, no recent travel

**What?**  
 Serious, unexpected, acute illness: acute severe pneumonia or respiratory distress, especially with hemoptysis, cyanosis, shock, widening of the mediastinum, pleural effusions

**When?**  
 Common syndromes occurring out-of-season

**Where?**  
 Multiple similarly presenting cases, cases linked in place or time

**When You See Unusual,  
 Think Outbreak!**  
 24-hour phone: (702) 383-1378

**Selected Reportable Diseases – August 2001**

Disease	Cases Reported		Year To Date	
	Aug. 2000	Aug. 2001	2000	2001
Campylobacteriosis	15	6	79	100
Coccidioidomycoses	3	1	17	17
E. coli O157:H7	3	2	6	4
Giardiasis	23	20	98	77
Hepatitis A	5	4	36	40
Hepatitis B	5	5	24	24
Legionellosis	0	1	0	3
Listeriosis	1	0	2	4
Measles	0	1	5	1
Meningitis, Aseptic/Viral	11	11	48	40
Meningitis, Bacterial	5	1	32	13
Meningococcal Disease	0	0	2	4
Mumps	1	0	4	2
Respiratory Syncytial Virus (RSV)	21	18	895	1277
Rotavirus	15	20	319	354
Salmonellosis	23	19	98	93
Shigellosis	13	13	83	37