

# Health science: bioterrorism preparedness

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Bioterrorism Preparedness The current of terrorism has gone beyond the use of warfare machinery to advancing in the use of mutated pathogens that are aimed at causing diseases when sent to the targeted areas. This is known as bioterrorism. Bioterrorism may be defined as the intentional release of toxically biological agents that are supposed to harm and terrorize citizens, due to political reasons and other causes. The U. S Center of Diseases Control (CDC) has classified several bacteria, viruses and toxins that can be used in a bioterrorism attack. These are most likely to cause much harm to the targeted population and include: anthrax, botulism, Tularemia, The plague, small pox and the Hemorrhagic fever that is caused by the Ebola virus or the Marburg Virus (Szipiro, Bernadette & Buckeridge, 2007). The most current bioterrorism attack was the release of bacillus anthracis which is the causative agent of anthrax in the US in 2001 through the postal mail services. These attacks were all indentified and confirmed through clinical diagnostics on the victims who were suspected to have come across the pathogens. However, this attack in the US proved that people are poorly prepared and less informed in matters concerning bioterrorism, and there is an urgent need to sensitize the public on this issue to mitigate the effects of a larger catastrophic attack in bioterrorism. The first bioterrorism related survey by HSPH project that was conducted in the midst of the anthrax attacks in the US in October 2001, and that was involved in following the letters and the preparedness that the public had in this attacks proved that the preparedness in such bioterrorism attack is wanting and much needs to be done to sensitize the public in general. Borelli (2009) argues that though there was a great deal of media campaigns to educate the public and create awareness of the particular attack, many Americans considered themselves

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safe and not worthy taking any precautionary measures against the anthrax attack. The survey indicated that many Americans considered themselves and their families safe from the anthrax attack, and at a lower risk of contracting anthrax. For example, 73% of respondents indicated that a family member would more likely contract a flu, 50% believed that a family member was more likely to be injured in a fall, while 41% believed a family member was more likely to be injured in road accident in the following 12 months; against a partly 14% who indicated that a family member may contract anthrax in the same time frame (Borelli, 2009). In addition, the study indicated that 37% of the respondents reported taking mild precautions when opening mails, 25% indicated taking precautions when maintaining supply in emergency food, water and clothing, while 43% of the respondents indicated ignorance in taking any of the 12 precaution measures as advised by authorities to protect against the anthrax attacks. Borelli further argues that only a partly 13% indicated taking 3 or more precautions among the 12 precautions advised by CDC to protect against the anthrax attacks. In addition, the survey indicated that the public had less trust in the political authorities in advising against the anthrax attacks and were taking the advice with a degree of contempt. 91% of the respondents indicated that they believed they could survive with a skin attack of the bacteria compared to the inhaled form, while 78% of the respondents believed that they could survive if attacked by the inhaled form of bacteria (Borelli, 2009). These figures portray a grim picture of preparedness and information among many citizens particularly in America, and the low level of preparedness and ability to take precautionary measures is a proof that more elaborate bioterrorism attack could have serious ramifications to the

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American citizenry currently. The American Public Health Association further explains that hospitals in the US are ill prepared in stock piling supplies in the event of a serious public health emergency that may result from a bioterrorism attack. However, Szapiro, Bernadette & Buckeridge (2007) argues that much is being done by the health bodies in preparedness of such attacks and that Americans are getting better and better prepared in case of similar attacks in the future, through information enhanced by the media, CDC and the political authorities. These have been carrying out sensitizing campaigns to educate the general public concerning the precautionary measures that they would be supposed to take to ensure protection against similar attacks in the future. Due to these campaigns as Borelli (2009) argues, 57% of the respondents showed some concerns mostly when opening mails and other deliveries as outlined in the 12 precautionary measures outlined CDC. However, Borelli asserts that very few respondents indicated taking more than 3 precautionary measures, and this explains the ill preparedness and information in the public concerning bioterrorism attacks. The vulnerability to bioterrorism attacks in the current highly advanced technologies that can allow DNAs of various strains of pathogens to be altered with an aim of making them more harmful in causing various diseases is imminent. Health and public authorities have a duty to educate, sensitize and ensure that the public is well informed on the precautions to take in such cases and the advantages of taking these precautionary measures as compared to the vulnerability of bioterrorism attacks. However, the current situation portrays that citizens are ill equipped with information and the required measures to be taken in cases of such attacks. Therefore, in case of similar attacks on a larger magnitude compared to the September

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2001 anthrax attacks, the low preparedness in health facilities and lack of information among the public would have a catastrophic effect if measures are not taken in advance to sensitize the public on bioterrorism attacks.

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