

Terrorist Attacks by Chemical or Biological Means: An Examination of Hospitals' Preparation for Handling Victims of Chemical or Biological Weapons of Mass Destruction

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Abstract

Any weapon capable of causing such widespread death and destruction that its mere presence in the hands of hostile forces poses a grave threat is considered a WMD. The bombing of the World Trade Center in 1993, the bombing of the Murrah Federal Building in Oklahoma City in 1995, the use of planes as guided missiles directed into the Pentagon and New York's Twin Towers in 2001, and the tragic incidents involving twenty-three people who were infected and five who died as a result of contact with anthrax-laced mail in the fall of 2001 have well established that the United States of America can be attacked by both domestic and international terrorists without warning or pro Hospitals have been diligently working to ensure that, in the event of a subsequent terrorist attack, they would be "ready" to provide appropriate medical care to victims. However, a recent nationwide survey conducted by the United States General Accounting Office (GAO) found that our nation's hospitals are still ill-equipped to handle large-scale casualties caused by chemical or biological WMD. As a result, there is a clear need for information about the current preparedness of hospitals in order to lay the groundwork for methodical planning and more general discussions about relative costs, probable effectiveness, the impact on the environment, and societal priorities as a whole. As a result, the purpose of this study was to investigate how well-prepared hospitals in the state of Mississippi are currently to care for victims of terrorist attacks that involve chemical or biological WMD. For this study, all acute care hospitals in the state were chosen. For the purpose of data collection and analysis, both quantitative and qualitative approaches were utilized. Six speculations were tried. Hospitals' functional preparedness plans, preparedness-specific education and training, decontamination facilities, surge capacity, pharmaceutical supplies, and laboratory diagnostic capabilities were examined through a questionnaire survey. According to the findings, the majority of hospitals in the state of Mississippi have documented preparedness plans, provided that specific preparedness education and training is provided. These plans also include plans for pharmaceuticals and supplies for treating victims in the event of a disaster involving chemical or biological WMD, as well as facilities for decontamination.

Keywords: Hospital; Terrorism; Preparedness; Weapons of Mass Destruction

Introduction

The United States (U.S.) is not immune to attacks by domestic and international terrorists without warning or provocation, as demonstrated by the bombing of the World Trade Center in 1993 and the Murrah Federal Building in Oklahoma City in 1995, the use of planes as guided missiles directed into the World Trade Center and Pentagon in 2001, and the tragic incidents following this same year involving twenty-three people who were infected and five who died as a result of contact with anthrax-laced mail. Hospitals have been diligently working to ensure that they would be prepared to provide victims with adequate care in the event of another terrorist attack in light of these incidents and the on-going threat of additional attacks [1,2].

However, a recent nationwide hospital preparedness survey conducted by the United States General Accounting Office (GAO) found that our nation's hospitals are still ill-equipped to handle large-scale casualties caused by any kind of weapons of mass destruction. The U.S. and its allies are still the targets of terrorist attacks and our lives and the lives of our friends allied nations continue to be threatened," President Bush stated in the State of the Union Address in 2005. Additionally, the President stated that while the United States has led the way in disarming terrorists and reducing their capabilities, there are still a number of "terrorist cells." Attorney General John Ashcroft said in a June 2004 news conference titled New Terrorist Threats that terrorists are planning another attack on U.S. soil, which could happen at any time. Ashcroft and Government Department of Examination (FBI) Chief Robert Mueller uncovered that al Qaeda accepts it is just

about 90% complete with plans for one more huge scope assault on the U.S. Ashcroft and Mueller additionally accept that the new rail line bombarding in Madrid has fortified the determination of some psychological oppressor gatherings, persuading them to go after the U.S. once more. As a result of the arrest of a possible terrorist in Ohio who planned to bomb a shopping mall, both agree that, despite the fact that a number of planned major events frequently occur in the United States that could be attractive targets for terrorists, the next terrorist attack may not necessarily occur during a major event. Instead, they suggest that for their subsequent attack, terrorists may target so-called soft targets like supermarkets, apartment buildings, or malls [3-5].

Porter Gross, Director of the Central Intelligence Agency (CIA), claims that al Qaeda-affiliated terrorist groups pose the greatest threat to the United States. In a recent statement to the Senate Intelligence Committee, Gross argued that, despite progress against al Qaeda, terrorist groups are determined to find ways to circumvent the United

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Received: 02-Jun-2024, Manuscript No jbtbd-23-91969; **Editor assigned:** 4-Jun-2024, Preqc No. jbtbd-23-91969 (PQ); **Reviewed:** 20-Jul-2024, QC No. jbtbd-23-91969; **Revised:** 25-Jul-2024, Manuscript No: jbtbd-23-91969 (R); **Published:** 30-Jul-2024, DOI: 10.4172/2157-2526.1000398

Citation: Jerry F (2024) Terrorist Attacks by Chemical or Biological Means: An Examination of Hospitals' Preparation for Handling Victims of Chemical or Biological Weapons of Mass Destruction. J Bioterr Biodef, 15: 398.

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States' security enhancements and launch additional attacks on American soil. Global Security Newswire writer Mike Nartker recently reported that a CIA Think Tank report prepared by the National Intelligence Council indicates that a terrorist group is likely to conduct an attack in the United States using biological weapons by the year 2020 [6]. The report called attention to that over the course of the following fifteen years, achievements in the worldwide conflict on psychological oppression and advances in data innovation are probably going to bring about an undeniably decentralized fear based oppressor danger, comprising of a mixed exhibit of psychological oppressor gatherings, cells and people. The report also suggested that these smaller and more knowledgeable terrorists would be especially well-suited for biological terrorism, that their laboratories would only need to be the size of a typical kitchen, and that their weapons would only need to be the size of a toaster. Hospitals and other public health infrastructure are recognized as an essential part of preparedness for natural and man-made threats, including terrorist attacks. However, in spite of these overall readiness endeavours inside the medical care industry, emergency clinics commonly are a point of failure in the readiness foundation, especially for those occurrences including synthetically or naturally tainted patients. In his State of the Union address in January 2003, President Bush proposed allocating an additional \$6 billion to the development of vaccines and other treatments against chemical and biological weapons of mass destruction. US hospitals' ability to care for CBWMD victims after terrorist attacks has improved as a result of these efforts. Scholars contend that a significant number of hospitals remain inadequately prepared for managing CBWMD victims despite these aforementioned policy modifications and advancements in hospital preparedness. In addition, numerous surveys of hospital emergency departments have revealed a widespread lack of knowledge, strategies, and resources for responding to incidents involving hazardous materials. James Burgess concurs with Henderson and asserts that even relatively minor incidents involving hazardous materials have overwhelmed many hospitals' response capacities, frequently resulting in secondary exposure among emergency department staff and necessitating hospital evacuations [7].

Population in Question

This reference includes a number of the state's long-term care and medical surgical hospitals. The acute care hospital designation provided by the Health Facilities Licensure and Certification Division of the Mississippi State Department of Health is also consistent with this reference. Additionally, the inclusion of hospitals in all of Mississippi's counties was made possible by this population selection strategy. Additionally, this group of hospitals accounts for seventy percent of the state's hospitals. Additionally, these hospitals offer a variety of viewpoints on the subject of hospitals' readiness to care for CBWMD victims in terrorist attacks. As a result, it is possible to draw precise inferences regarding the general preparedness of Mississippi hospitals in terms of their capacity to care for victims of terrorist attacks. For the purpose of determining which of the designated acute care hospitals might be included in this study, the Mississippi State Department of Health's Directory of Mississippi Healthcare Facilities was used. Two sections of a self-administration questionnaire survey were constructed and tested for validity and reliability. The purpose of Section One was to gather participant demographic data. The specific elements of preparedness that is required for managing victims of an attack involving CBWMD were the primary focus of the second section. The poll study with an introductory letter and pre-stepped return wrap was sent to all intense consideration clinics in the State. Hospitals that did not respond by the specified questionnaire return date were contacted again [8].

Information Investigation

Information were investigated using the Pearson Item Second Connection to decide, if any, a relationship existed between the readiness of medical clinics and the accompanying chosen readiness factors recorded practical readiness plans explicit readiness schooling/preparing; capacity is increased by the availability of decontamination facilities; accessibility of drug systems and supplies; and the capacity for laboratory diagnostics. The degree of linear relationships between the range of variables was measured using Pearson r correlation. The correlations between the variables were stronger the closer the values were. At the, the Pearson correlation coefficient critical values table was utilized. level of significance that takes into account the likelihood of an alpha error. In addition, Guilford's Guideline for Interpreting the Strength for Values of r served as a benchmark for determining the degree to which the independent and dependent variables were associated with each other. In order to provide a comprehensive description of the population under investigation, demographic data were also analysed. These numbers include: number of beds in hospitals and emergency rooms, location of hospitals; number of patient visits annually; whether or not the hospitals were a component of a larger health care system; whether hospitals received any funding for preparation; and each hospital's current accreditation status [9].

Discussion

In the event of an attack involving chemical or biological terrorist agents, many of the hospitals in the state of Mississippi do have appropriate pharmaceutical procedures and supplies, provide specific preparedness education and training, and have documented and operational preparedness plans. Sadly, a number of hospitals reported that they were unable to increase their surge capacity or provide diagnostic laboratory services that could analyze and identify biological or chemical warfare agents. Although urban hospitals in Mississippi were generally more prepared than rural hospitals, only a few of these hospitals fully met the specific criteria used in this study to measure "true" preparedness. Rural hospitals in Mississippi were not as prepared. The fact that the state has nearly twice as many urban hospitals as rural hospitals may have contributed to the higher participation rate of urban hospitals in this study. Urban and rural hospitals could only be found in the state's southeast. Only urban or rural hospitals existed in the other six regions. The majority of hospitals had beds for inpatients and emergency room patients [10].

The majority of hospitals did not belong to a larger health system and had not received any federal funding for preparedness initiatives. It's possible that these factors point to the fact that hospitals are limited by the capacity and availability of the resources they already have to be ready to care for victims of chemical or biological warfare. The Joint Commission on Accreditation of Healthcare Organizations, on the other hand, granted accreditation to the majority of the hospitals. As a result, given the reports that some of the hospitals in this study were not prepared according to the measurement criteria, it is likely that some of them are better prepared than indicated.

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