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White Powder Incidents: Did we manage, and could we manage again?

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Abstract

THE USE OF BIOLOGICAL WEAPONS has been around since before the siege of Kaffa in 1346 when the Tartars catapulted plague infected bodies over the ramparts. The potential for terrorists to use biological agents against a civilian population has been well understood by security agencies for some time. However, until the tragic use of anthrax through the mail system of the United States last year, the full implications and reality of such incidents was not well understood by mainstream policy makers and budget guardians.

Australia has a very well developed and practiced emergency response system at both the state and national levels. Agencies fully understand their roles and responsibilities and significant effort had been exerted as part of the 2000 Sydney Olympics to prepare for potential chemical, biological or radiological incidents. The "white powder" hoaxes of late 2001, however, presented a very different challenge for public health officials and the Australian emergency management system, which, despite some early problems, managed well. Officials were faced with a high level of uncertainty, an unclear level of risk, unfamiliar coordination arrangements, a very nervous public and reactive media. Paradoxically, while we do not want such terrorist incidents to occur again, without more incidents it will be difficult to maintain an effective level of preparedness.

INTRODUCTION

White powder incidents is a shorthand reference to the hoaxes and mis-identifications that occurred following real anthrax laced letters that were sent in the United States after September 11, 2001. These letters resulted in a worldwide scare campaign by opportunistic, but not very original individuals sending a range of inert substances that they alleged were anthrax through the mail. The impact of these incidents was considerable. First responder agencies were stretched, laboratories were swamped, postal services interrupted, and the public inconvenienced. It also generated considerable media hype and panic such that flour on a bread roll became a white powder incident, which resulted in the mid-flight grounding of a flight from Brisbane to North Queensland and decontamination of the passengers.

This paper doesn't go through a chronology of the over 3000 recorded white powder incidents that we had in Australia. It instead focuses on how Australia's emergency response system is structured and how we might maintain an adequate level of preparedness for managing a repeat or similar situation.

Before discussing preparedness for managing bioterrorist incidents, it is important to have an understanding of the context, just what is being prepared for, and why. We need to examine the threat and risk environment. To do this we need to look at the known offensive use of bio-agents as weapons; the potential for the use of such weapons; and the consequences on a population if such weapons were to be used.

We know that the use of biological agents as weapons is not new. For example, in ancient Athens, Solon used the purgative herb, hellebore, to poison the water supply during the siege of Krissa, and the siege of Kaffa in 1346 saw the Tartars catapult plague-infected bodies over the ramparts. However, the number of times that such weapons have been used is few. In recent times, the most notable incidents have been the deliberate contamination of a salad bar with salmonella in 1984 in the United States, the failed use of botulinum toxin by the Aum Sect in 1995 in Japan and, of course, the use of anthrax.

While the number of actual incidents is few; this needs to be balanced by the potential to use such agents.

There has been much publicity around the Russian former bio-weapons program and the current Iraqi bio-weapons program. There is also regular reporting about the interest of terrorist groups in acquiring bioweapons. Many of the potential agents are readily available. Anthrax is a common soil bacteria causing annual outbreaks in cattle, viral diseases are endemic in some countries and, more recently, genetic sequences have become commercially available.

To examine the consequences, we need look no further than the disruption and panic that followed the anthrax letters in the United States and the subsequent hoaxes there and in other countries including Australia. Nobody could have predicted the impact that five letters, amongst millions of mail items, could have had. The Brentwood mail centre is still closed.

The last part of the context matrix is the ability to rapidly detect a bio-agent. Currently there is no bio-detection system equivalent to those available for chemical and radiological agents.

In summary; the technology, capability and perhaps more significantly, the intent to use a bio-weapon exists and the consequences from the use of a bio- weapon are significant. A risk assessment of these parameters is the basis for the actions taken by policymakers and emergency managers.

CURRENT ARRANGEMENTS

In Australia, the constitutional responsibility for the safety of citizens rests with the state or territory in which they live. The Commonwealth provides support and coordination for prevention and preparedness measures and assists with response and recovery operations when requested. This system has led to all states and territories having well-established agency-specific and multi-agency emergency plans at all functional levels within the state or territory.

Through Emergency Management Australia (EMA), the Commonwealth supports the states and territories and coordinates Commonwealth assistance on a routine basis as well as under specific response plans in times of emergency/disaster.

All plans are regularly reviewed and exercised, using a network of key people, to the point that there is a high level of confidence that our emergency managers can efficiently deal with any situation. In terms of the paper's theme, the management of white powder incidents marks the beginning; the point from which we can judge quite clearly how well our preparedness has been maintained.

The questions remain, how does a population prepare? Can it prepare at all? How does it maintain that preparedness?

PREPAREDNESS

In terms of non-terrorist incidents, the Australian emergency management system has been able to effectively respond to any emergency that has so far presented in Australia. So the answer to the questions of whether a population can prepare and remain prepared has to be yes, at least for non-bioterrorist incidents. Can we extend this current system to cover bioterrorist incidents, or is there some fundamental aspect of a bioterrorist incident that makes that approach impossible?

All disasters have features that are unique and that require different responses. For example, structural collapse (crush injuries and complicated casualty extraction procedures) versus fires (burns and respiratory injuries requiring years of treatment) versus chemical accidents (contaminated casualties, specialised medical treatments). In the case of bioterrorist incidents, the differences are that:

- There will generally be no incident site and therefore no or little need for the usual emergency responders (police, fire & ambulance). An alert medical person and capable laboratory will be the ones to discover the incident when patients pre-sent and health authorities will take the lead in managing it.
- The tools used to combat the incident will be a pill and a needle. These are not normally available in the quantities needed to treat the numbers of casualties that will result from a bioterrorist incident and/or they may not be licensed to be used for that purpose.
- It is difficult to prepare in an optimal fashion for a terror incident.¹ There is too low an incidence of such events to justify the enormous financial out- lay it would take to prepare every community for every event. Equally, there are too few incidents for a community to acquire enough collective experience to make a significant impact on a response to the next incident.
- It is likely that a covert release of a biological agent will not be recognised until enough cases are observed and reported to allow recognition of an unusual event. Given that people will present with flu-like symptoms to widely dispersed medical facilities, this problem is greatly compounded.

Having considered the differences between bioterrorist incidents and other emergency incidents, there are also many similarities. All are unforeseen, they create disruption and destruction, they cause casualties and they are, by definition, beyond the capacity of local resources to manage. Viewed in this light, Australia's success in managing non-bioterrorist incidents should give us a sense of confidence that our emergency management system can handle a bioterrorist incident by simply building in arrangements to address those aspects specific to a bioterrorist incident.

SPECIFIC ASPECTS OF BIOTERRORIST INCIDENTS

The main aspects that need to be incorporated are:

- access to intelligence information;
- an alert health system;
- laboratory capability;
- availability of appropriate treatments; and
- a nationally coordinated and consistent communications arrangement.

Before consequence managers can begin to prepare for a bioterrorist incident, it is critical that the health sector and other consequence managers have an under- standing of the capability and intent of terrorist groups and access to warnings of specific potential incidents.

As stated earlier, it is likely that the first indication that there has been a bioterrorist incident will be the presentation of patients in medical facilities. Therefore, it is critical that staff of those facilities have sufficient aware-ness that they do not automatically rule out the possibility that a deliberate release of an agent has occurred.

Having identified the possibility, the capacity to rapidly analyse a sample to identify if an unusual agent (e.g. anthrax) is present becomes the next critical step. Should such an agent be present, that information needs to be communicated widely within the health sector and other relevant agencies (such as the police), treatment of the patient needs to begin and other patients identified.

In Australia these aspects have been addressed through appropriate membership on relevant commit- tees such as the National Chemical Biological and Radiological (CBR) Working Group and its state and territory equivalents. National education and training material and courses have been developed for use by national and state/territory agencies. Specific CBR incident management plans have been developed at all levels, from facility to state and national, and these arrangements are regularly exercised.

Laboratory capability is being addressed through the acquisition of equipment, training, and links to facilitate the rapid uptake of new developments in the diagnostic field. In the area of treatments, the Commonwealth

Department of Health and Ageing is establishing a stockpile of relevant pharmaceuticals; facilitating the development of national treatment protocols and supporting national coordination through groups such as the Australian Disaster Medicine Group, Communicable Diseases Network Australia and the Public Health Laboratory Network. Similar activities are being undertaken in the agricultural sector through the Commonwealth Department of Agriculture, Forestry and Fisheries Australia and its state and territory equivalents.

Recognising the significant role that communications will have in managing an incident, the Department of Health and Ageing manages the National Emergency Media Relations Network. During the white powder incidents, the Department's media team enacted their national information networks, met with the press officers of the national security network and coordinated a consistent approach by all media spokespeople, as well as handling the hundreds of calls from the public, agencies and journalists.

CONCLUSION

A bioterrorist incident in Australia will undoubtedly create significant problems. Australia, however, does have an excellent emergency response system that is being built on to ensure it is capable, and stays capable, of managing a bioterrorist incident.

REFERENCES

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