



## Collaboration and commitment

October 2001 was a demonstration of the ability of the Australian emergency services and microbiologists to collaborate effectively in handling the over 3,000 'white powder' incidents that occurred around Australia during the first three weeks.

About a tenth of these resulted in material that needed to be tested in the laboratory, though laboratories still had to devote resources to assessing and rejecting many of the other samples. Needless to say a large amount of time was also required to develop tests, share information and expertise nationally and internationally, communicate with other services and government departments, and to reassure and train staff.



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The first week was fraught, with the emergency services demonstrating a high level of commitment and precautions such as use of the Level A protective suits, which created much publicity and community concern, and lots of Hazmat bins arriving in the Public Health Laboratory Network (PHLN) PC3 laboratories. The Hazmat bins were often filled with all the contents of the office being sampled.

During the second week it was agreed that if it couldn't fit in a double set of 'clipseal' bags or in 250mL sample containers then the PHLN laboratories would not receive the samples. The 'contaminated' rooms were then left closed until cleared by laboratory testing. Preliminary results for high risk samples were usually available within 1 hour and final results within 48 hours.

The Department of Health and Aged Services arranged for representatives of the State, Territory and Commonwealth PHLN laboratories to attend a polymerase chain reaction (PCR) workshop for the identification of toxin containing *Bacillus anthracis*, which was held in the Queensland Health Scientific Services Laboratories in Brisbane at the end of the first week. During the second week a risk assessment protocol developed by the Victoria Department of Human Services was adopted, greatly facilitating the timely testing of high priority samples and reducing their number, and reducing the overall number of samples. Fortunately, none of the samples tested contained anthrax.

The response was effective because of the high personal commitment of all those involved. In addition, planning and training undertaken in preparation for the 2000 Sydney Olympics produced a good network for responding to plans and training for first line responders.

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The PHLN discussed their response to incidents; there had been two 'incidents' prior to October 2001 that gave experience in handling samples and interaction with the emergency services. The National Chemical, Biological and Radiological Working Group had been planning responses to CBR incidents for sometime and provided a forum for linking the PHLN with the other groups involved in responses and also with the first line responders, fire, ambulance and police services. But if it were not for the personal commitment of those involved, the response would have failed.

Certainly we can compliment all involved for their successes during the 'white powder' incidents but what is not appreciated is the strains and problems within the system. All the PHLN laboratories have their usual diagnostic services to provide and there is little, if any, excess capacity.

Towards the end of the third week a number of the laboratories indicated that they would not be able to continue if incidents continued. Unfortunately, in the absence of any agreed mechanism for funding large public health emergencies such as this, many laboratories were left to foot the bill. This needs to be resolved or it may limit the capacity of laboratories to respond in the future.

In addition, the experience identified deficiencies in preparedness of laboratories for biological threats. Some jurisdictions lacked PC3 laboratories while a number of the PC3 laboratories within the PHLN did not fully comply with the new AS/NZS 2243.3:2002 Safety in Laboratories Part 3 Microbiology Standard.

There are serious problems in the capacity of laboratories, hospitals and emergency services to respond to a significant biological incident. We are all aware that our hospital system is regularly on emergency bypass, and where the minimum of 200 hundred beds would be found needs to be determined.

The Australian Government has provided significant funds for the fight against terrorism but most of these have gone to border control, intelligence services, defence and Government Departmental Committees and coordination. Seventeen million dollars has been provided to support first line responders, with most going to emergency services for personal protective equipment and for detection equipment, and about \$800,000 nationally for the PHLN laboratories in each State and Territory to be supplied with PCR gene amplification equipment. However, this funding is nowhere near sufficient to meet the national need for laboratory biopreparedness, and the PHLN has prepared a detailed submission that still remains under discussion.

Finally, it is not clear how well a real anthrax incident will be handled. There is a real problem if the responders and

laboratories have to handle anthrax powder because of its nature. It tends to just float and move rapidly throughout the area. Because of the risk, overseas laboratories are handling the powder in PC3 facilities with staff wearing extra personal protective equipment, including respiratory protection.

Decontamination of any contaminated area also poses major problems, especially if it is a large public area. Major research efforts are needed to address decontamination.

There is also a need for far greater interaction between health and veterinary authorities and a greater standardisation of information systems and sharing of information. It is encouraging to seeing that the Australian Biosecurity CRC has been supported, but this is a small response to a major set of issues that must be addressed.



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