Report of Special HeBE Project Team

On Issues Related To

Enhanced Biological Threats

At This Time

Feb 7 2003

Introduction

Recent international developments would suggest that the world is entering a period when an outbreak of war or even enhanced international tension could provoke bioterrorism type events, either real or hoax, in a number of countries.

These events could include the introduction of bioterrorism type agents into homes, workplaces or public spaces, claims that such agents have been released or the emergence in the community of cases, or clusters of cases, whose symptoms are suggestive of the release of such agents. Media reports make it clear that many countries now take these threats very seriously and are preparing accordingly.

While it seems unlikely that this country would be the primary target of a bioterrorism attack, problems could arise here with the arrival of individuals who had been infected abroad. Furthermore, experience during the "Anthrax" scares of the post September 11 period would suggest that any real or hoax incidents abroad are likely to result in copycat incidents here. For these reasons it seems clear that both short and longer term preparation for biological threats is also required here.

During their regular teleconference on January 10th, 2003, the Health Board Chief Executive Officers agreed to provide resources to HeBE, so that a special project team could be established, within the context of the proposed HeBE Major Emergency Planning Project, to work for three weeks on issues associated with the perceived increased threat at this time.

Mr. P. O'Riordan of the Mid Western Health Board and Mr. R. Bonar of the Western Health Board were assigned to the project. Originally it was expected that an experienced Public Health Specialist would also be assigned to the project but, in the event, this did not happen. Since the Public Health Department will play a key role in each Health Board's preparation for and response to any biological incident, the availability of that expertise would have greatly enhanced the work of the group.

Project Group Activity

During the period involved Mr. O'Riordan and Mr. Bonar met with the Chief Ambulance Officers at the National Ambulance School on January 16th and subsequently in Limerick on January 30th. At these meetings the issues involved for the Ambulance Service were discussed and agreement was reached on a number of priorities. Mr. O'Riordan and Mr. Bonar also visited the Headquarters of the Northern Ireland Ambulance Service on January 23rd and discussed the issues involved for that service with the Emergency Planning Officer.

During the same period, Mr. O'Riordan attended meetings of the Expert Committee on Contingency Planning for Biological Threats on January 17th and 28th and he also attended meetings of the Operational Subgroup of that Committee on January 16th and January 29th.

Findings

The document "Biological Threats, a Health Response for Ireland" (available at www.doh.ie), which was produced by the Expert Committee in May 2002, listed a number of issues which required action at a national level. Some of these are still under active consideration at this time, including:

- The designation of hospitals as centres for the reception of patients with smallpox or quarantine units for those who may have been exposed to smallpox and their contacts
- Decisions in relation to the vaccination of staff in these designated smallpox units and other front line emergency personnel
- Preparation of information material on the various biological agents for key health professionals.

The Biological Threats document also indicated the need for Health Boards to organise on-call rosters, so as to ensure that appropriately trained individuals are available on a 24 hour basis, should an emergency arise. Since the active participation of Public Health Departments is essential to the preparation for and response to any biological incident, every effort should be made to ensure that the present issues are resolved and the necessary participation occurs. In view of the perceived increased threat at this time

(1) It is recommended that each Health Board should check to ensure that the out of hours contact details of all those who might be required in the response to any biological incident or threat are available and correct.

In the event of an overt release of a biological agent, or the discovery of a suspect package, the document nominates key roles in the front line response to the Gardai, the Army, the Fire Service, the Ambulance Service and the local Director of Public Health. Protocols and procedures for these site-specific events were developed during the post September 11 "Anthrax" scares and these are dealt with further below.

The document also advises on actions required in the event that suspected or confirmed cases of infection, involving the Category A agents (Anthrax, Smallpox, Botulism, Plague and Tularaemia), should emerge either in a hospital or in the community. In such a situation the document makes it clear that the Director of Public Health and his/her representatives will play a key role. That role to include:

- Establishing a local team to commence epidemiological investigation
- Organising prophylaxis and/or vaccination as appropriate
- Organising telephone help lines
- Providing advice and information to the public via the media, particularly local radio stations and newspapers, and the Health Board web site.

(Note: Similar guidelines for cases of Viral Haemorrhagic Fever have been produced by the National Disease Surveillance Centre and are available at www.ndsc.ie.)

Many of these activities are part of standard disease surveillance procedures. Nevertheless, in the present circumstances

(2) It is recommended that each Health Board should re-examine existing arrangements in the areas of disease surveillance, contact tracing, provision of chemoprophylaxis, vaccination and containment and update these as necessary; assess the level of preparedness to respond to Category A type infection cases; and, where considered appropriate, conduct simple "walk through" exercises of the relevant procedures and protocols with key staff.

(3) It is also recommended that each Health Board should assess its ability to provide prompt and up to date advice and information to the public, in a crisis situation, via a telephone help line service, the media and the Board's web site.

In the absence of a Specialist in Public Health Medicine, the project team did not expand further on this area. However, the team did examine a number of Major Emergency related issues in greater detail under the headings of Site Specific Incidents, Decontamination, Interservice Issues, Transportation of Patients with Infectious Diseases and Ambulance Service Personal Protective Equipment (PPE).

Site Specific Incidents

For the purposes of this report, Site Specific Incidents are defined as incidents at a specific location involving either the release (or threatened release) of a suspect/hazardous substance in a public area or the discovery of a suspect package

During the post September 11, 2001, period there were many incidents of the latter type and the emergency services were called to numerous cases where packages or letters containing white power had been discovered. Because Anthrax had been found in similar situations in the USA, these cases were initially dealt with by the emergency services as if Anthrax was involved. However, all of these cases transpired to be either of errors or hoaxes. The protocols for dealing with these events have been documented in the Biological Threats document and in the present circumstances

(4) It is recommended that a common approach to the implementation of the "Anthrax" type protocols should be agreed within each Health Board by the Ambulance Service, the Department of Public Health and the Emergency Planning Officer (where appropriate).

(5) It is also recommended that meetings be held with key external agencies so as to ensure an agreed approach to the inter-service aspects of the protocols. These meetings to be attended by representatives from the Ambulance Service, the Emergency Planning Office (where appropriate), the Department of Public Health, the Gardai, Fire Services and, where possible, the Army. These meetings to be arranged at a regional or county level as appropriate and within local Major Emergency Planning frameworks, as far as possible. The meetings could include simple "walk through" exercises of the protocols.

Decontamination

The Ambulance Services of most Health Boards and the ERHA now have mobile decontamination units, or are in the process of acquiring them. These units may be used during the response to any accident, including a Major Emergency, which involves contamination by a hazardous chemical or a biological agent. In each case the deployment of the decontamination unit(s) is a strategic issue, which requires careful consideration under a number of headings.

Most Fire Brigades also have decontamination units, but these are generally of the cold spray type, which are more appropriate to the decontamination of a fully suited fire fighter emerging from a contaminated area. Ambulance Service decontamination units, on the other hand, use warm water and a "rinse – wipe – rinse" technique, which is more appropriate to individuals in street clothing and patients with an injury.

If all effected individuals are expected to remain at the incident site until the issue of decontamination has been dealt with, then it is preferable that the Fire Brigade and Ambulance Service decontamination units should operate jointly at the site, each treating the appropriate persons. This approach has the advantage of preventing contamination of ambulances as patients are transported from the site.

If, however, there is the probability that contaminated individuals may be brought from the site to an A&E Department without being decontaminated, then the possibility of locating a decontamination unit at an A&E Department should be seriously considered. In either case close cooperation with the Fire Service, particularly on the issue of contaminated water disposal, is recommended.

A schematic of a decontamination site layout is shown in Fig 1.

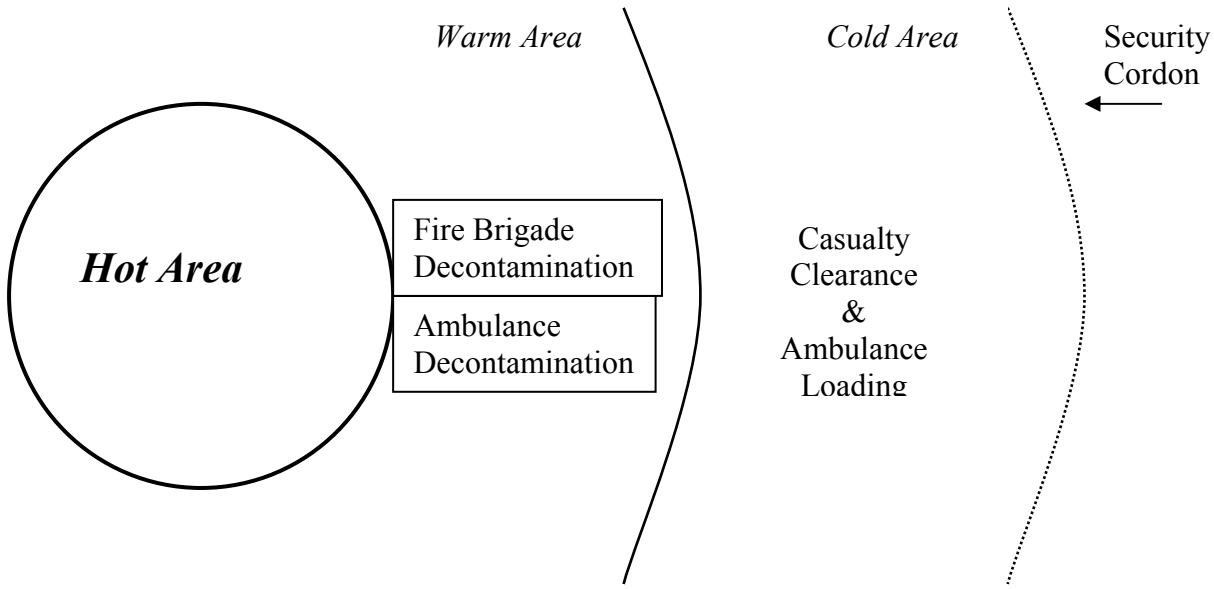

Fig 1 - Schematic Layout of Decontamination Site

Where a decontamination unit is set up on site, a series of cordons should be established setting out

a) An inner **"Hot Area"** which is treated as contaminated and where usually only fire fighters with appropriate PPE will enter

b) A **"Warm Area"** where the decontamination unit or units are located and where PPE appropriate to that area is required and

c) A **"Cold Area"** where the casualty clearing station and ambulance loading point are located and where only standard PPE is required

d) Outside the cold zone an outer secure cordon should prevent unauthorised public access to the emergency services working area.

To ensure effective use

(6) It is recommended that protocols for the use of decontamination units should be discussed and agreed within each Health Board and the ERHA. The discussion should, at a minimum, involve the Ambulance Service, relevant A&E Departments and the Emergency Planning Officer (where appropriate).

(7) It is also recommended that the deployment and use of decontamination units should be discussed locally with Fire Brigades and all necessary protocols prepared and agreed.

Inter-Service Issues

The Biological Threats document makes it clear that, in the event of the release of a suspect biological agent, or the discovery of a suspect package, a combined services response, involving the Gardai, the Fire Service, the Ambulance Service, the Director of Public Health and the Army, will be required. Similarly, in the event that suspected cases of infection should emerge in the community, close cooperation between Health Boards and the Gardai will be required in terms of escorts for the transport of infected patients, security at special facilities, etc.

However, if there is a confirmed case of infection or the confirmed release of a biological agent in this country, North or South, it will be a major national event and will attract immense interest from the media, both national and international, the public and the political establishment.

In the area involved there will be an enormous demand for prompt, accurate information and advice in a situation where rumours or the issue of inaccurate information could cause panic and possibly even lead, in extreme cases, to public disorder. In such a situation the co-ordination of the communications efforts of local agencies, particularly the Gardai and the Health Board, and the co-ordination of those

local efforts with those of the appropriate national agencies will be vital. For these reasons

(8) It is recommended that Health Board CEOs should convene meetings with local Garda Chief Superintendents and Local Authority City/County Managers so as to discuss with them the inter-service issues involved in the preparation for and response to biological threats and to ensure that there is understanding, clarity and agreement on the issues involved. These meetings could be arranged within local Major Emergency Planning frameworks.

Note: Should a case arise in a Border area, obviously special problems of co-ordination will arise and these need to be considered by the managers involved.

Transportation of Patients with Infectious Diseases

If a patient is suspected or confirmed as having a Category A type infectious disease it may be necessary to move that person to a designated observation or care unit.

Such patients should be transported in ambulances specifically designated for that purpose. These ambulances should have a patient care compartment which is separated and sealed from the driver's cab, ie there should be no possibility of airflow from one compartment to the other.

In such cases special arrangements should apply in relation to the personal protective equipment of Ambulance Service (and other) staff, the disposal of waste and the subsequent decontamination of equipment and ambulances.

Draft protocols for the transport of such patients are currently being prepared and will be issued to the CEOs for approval as soon as they are completed.

(9) It is recommended that appropriate arrangements in relation to ambulance designation, crew personal protective equipment, crew training, disposal of waste and subsequent decontamination of equipment and ambulances are followed, whenever patients, who are suspected or confirmed as infected with Category A type diseases, are moved.

Ambulance Service Personal Protective Equipment

Ambulance Service staff, who may be required to work in a decontamination unit or travel with patients who are suspected or confirmed as infected with a Category A type infectious disease, must take appropriate precautions, including the wearing of appropriate personal protective equipment.

A schedule of appropriate personal protective equipment for Ambulance Service personnel is currently being prepared and will be issued to the CEOs for approval as soon as it is completed.

(10) It is recommended that Ambulance Service Personnel be provided with Personal Protective Equipment appropriate to whatever task is being undertaken and that this provision is supported by appropriate training

Conclusion

Through their standard disease surveillance systems, emergency response capabilities in a wide variety of areas, management structures, communications units and Major Emergency Planning processes, the Health Boards already have a significant response potential in place. This is demonstrated regularly as crises of various types are successfully dealt with.

However, an outbreak of a Category A type infectious disease could still cause significant problems for the Board involved and for the Irish health system in general.

At present a number of issues require resolution at both national and local levels, so as to allow completion of the work required to ensure that the level of preparedness of the Irish health services in the face of biological threats is maximised. Obviously a significant input by the Boards' Public Health specialists at this stage would greatly enhance the planning and preparation processes.

However, even when all important decisions have been taken, key individuals and facilities have been identified, all necessary equipment and consumables have been procured and all relevant procedures and protocols have been prepared and agreed there will still be a need for a significant programme of information, awareness, training and pre event implementation before there can be confidence that an effective response is assured. Current international events would suggest that action is required now on a number of fronts.