Health Preparedness for CBRN in the UK, threat and response

John Simpson
Head of Emergency Preparedness
Health Protection Agency
John.simpson@hpa.org.uk
0044 19806 12903
“it will be only a matter of time before a crude version of a CBRN attack is launched at a major Western city”

Eliza Manningham-Buller
Head of MI5
17th June 2003
Reducing the Impact

- Counter terrorism measures
  - Intelligence
  - Interdiction
- Detection of releases
  - Difficult
  - Where and when?
- Detection of cases
  - Most important
  - Refine existing systems
- Interventions
<table>
<thead>
<tr>
<th>Threat Agent</th>
<th>Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacillus anthracis</td>
<td>Anthrax</td>
</tr>
<tr>
<td>Yersinia pestis</td>
<td>Plague</td>
</tr>
<tr>
<td>Francisella tularensis</td>
<td>Tularaemia</td>
</tr>
<tr>
<td>Smallpox virus</td>
<td>Smallpox</td>
</tr>
<tr>
<td>Clostridium botulinum toxin</td>
<td>Botulism</td>
</tr>
</tbody>
</table>
However in “New World”

- SARS
- BT organisms e.g. Smallpox, Plague
- Avian Influenza?
Capability

Exists
Garage is large enough
Does not require sophisticated equipment
Culture media from supermarket
Dispersion can be achieved
Where to obtain the organism?
Production of fine powder requires expertise
Functions

Advice to Government on health protection
Delivery of services to the NHS and other agencies
Impartial, authoritative information and advice to the public professionals
Rapid response to new threats and emergencies
Improved knowledge base through research and development, education and training
UK Health System - NHS

>99% of emergency care in UK provided by NHS
comprehensive family doctor service
NHS Direct - telephone advice service
RCGP spotter practices
British Paediatric Surveillance Unit
notification of communicable diseases
Long history in UK of emergency services working together - IRA
LESLEP - London Emergency Services Liaison Panel
Joint training
Joint exercising - table top and live -ex
Regional Resilience Forums
Key Principles of Emergency Planning

Build on what we know and are familiar with

Strengthen the Infrastructure

Add Additional Features
  Guidance
  Countermeasures

Audit, Train, Exercise, Practise

Be Multi-disciplinary /Multi-agency
Existing surveillance systems

NHS Direct
clinical reporting of illness
RCGP Sentinel surveillance system
British Paediatric Surveillance Unit
Hospital Episode Statistics – final diagnosis
Laboratory reporting - >90% NHS laboratories report to CDSC
Statutory notifications - specified infections
Existing surveillance systems

Food Surveillance

animal, food & water, human - joint surveillance for all government departments

Emerging infections - work with DEFRA on animal surveillance
NHS Direct

24/7 telephone helpline providing health advice and information

Pilot in 1998, now universal coverage E&W

Staffed by senior nurses guided by clinical decision support software

200 algorithms which triage symptoms to a range of outcomes from self help to emergency care
Data can be collected and analysed daily
aim to identify and increase in disease
a covert deliberate release may cause illness with an extended mild prodromal phase with cases opting for self care or contact with NHS direct.
We may be able to recognise earlier
NHS Direct - Key symptoms

Cold/flu

cough

fever

difficulty breathing

vomiting

diarrohea

double vision

eye problems

lumps

rashes
NHS Direct - analysis

Data compared with control chart

if no reasonable explanation for “exceedance” additional data requested [2/3 hrs]

can ->GIS

may contact callers to get more information

results sent to HPU weekly
site
symptoms
age group
call outcome
can add postcode [zip code]
Training

Medical Microbiologists
General Practitioners
Health Physicists
A & E staff & professional support staff
SHA & PCT staff
Local Authorities, Environment Agency
Easingwold Courses

> 200/week
# Exercises

## Emergency Response Division

### Exercises/Events Programme up to July 2004

**Date** | **Exercise** | **Comment**
--- | --- | ---
March 24, 2003 | Red Scar I | Smallpox exercise For S-E and national response
June 6 | Shipshape | SARS exercise Wales, Bristol and SW Region
July 7 | Red Scar II | 2nd smallpox exercise for N-W. N-E. Yorks & Humber regions
September 9, 10, 11 | Global Mercury | WHO International smallpox resilience exercise NL exerc. controller. DH & HPA to play
October 10 | Green Goblin | The East and East Midlands Industrial chemical deliberate release, multi-agency
December 9 | Goliath | SARS Exercise, Northern Ireland
January 23, 2004 | East Wind | Eastern Region Dirty Bomb, multi-agency
April 27, 28, 29 | Magpie | Newcastle Field Exercise Simulated Chemical Weapon release. Full field operation with simulated casualties, mass decontamination etc.

### Involvement only

<table>
<thead>
<tr>
<th>Date</th>
<th>Exercise</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>February '04 27, 28, 29</td>
<td>Red Signal</td>
<td>Thames Valley Police radiological release exercise. DH/HPA part of national planning team and to play</td>
</tr>
</tbody>
</table>
Reducing the Impact
What Next

• Early communication
  • Of suspicion
  • Tell the HPA

• Alert system and response plans

• Medical counter measures
  • SMART teams/smallpox vaccine
  • Post exposure antibiotic prophylaxis

• Control of infection
• Decontamination
Reducing the Impact
HPA Assets

• Laboratory capability - for 5 key biological agents
• Health Protection Teams - case finding
• POD’s - ciprofloxacin/ventilation apparatus
• Strategic co-ordination
• Integration of surveillance information
• Guidance for professionals and the public
What sort of PODS are there

Pod 1
Modesty
Pod 2
Nerve agent
Pod 3
Cyanide
Pod 4
Equipment
Pod 5
Ciprofloxacin
Pod 6
Doxycycline