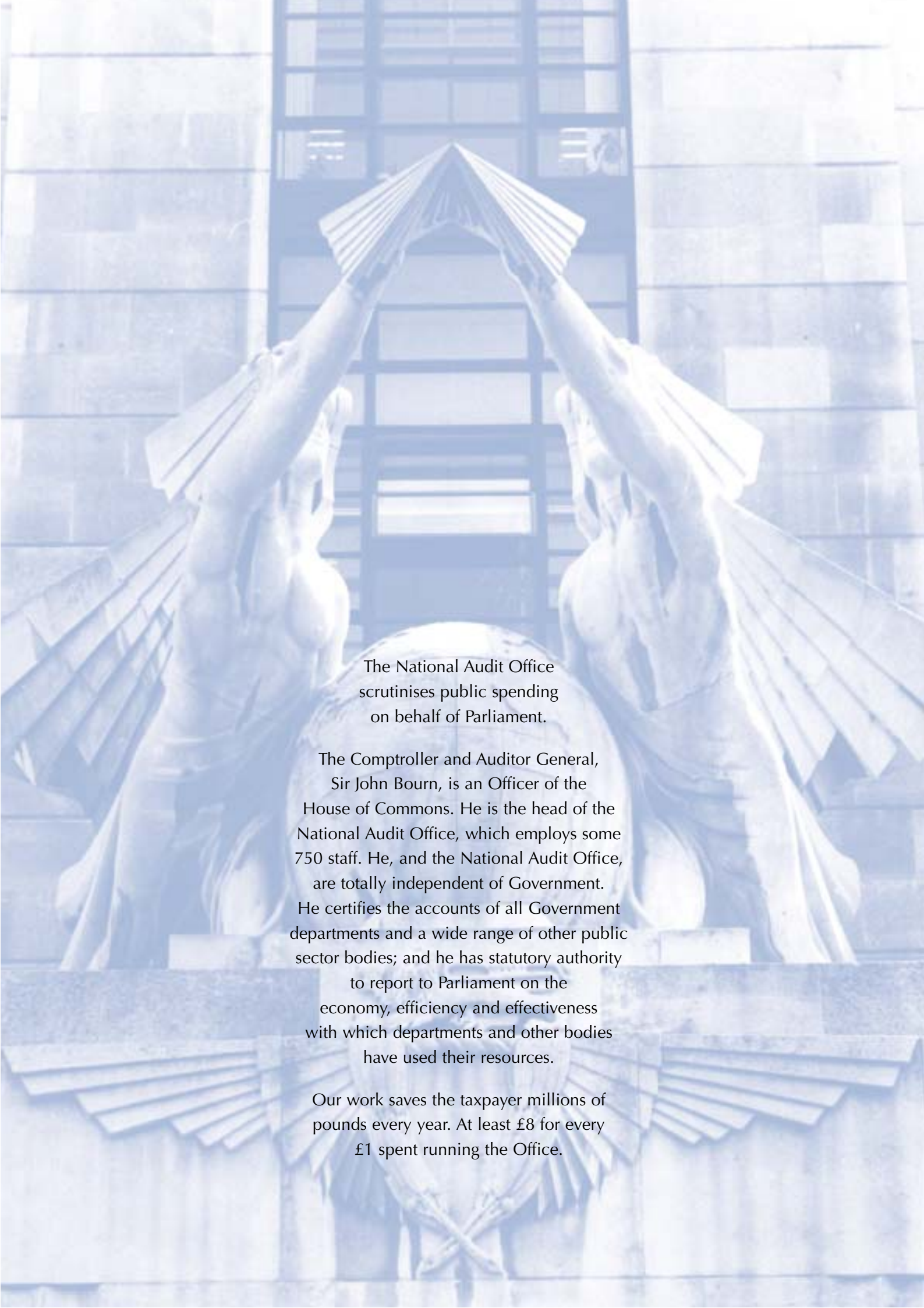


Facing the Challenge: NHS Emergency Planning in England

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 36 Session 2002-2003: 15 November 2002





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Facing the Challenge: NHS Emergency Planning in England



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This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

John Bourn National Audit Office
Comptroller and Auditor General 5 November 2002

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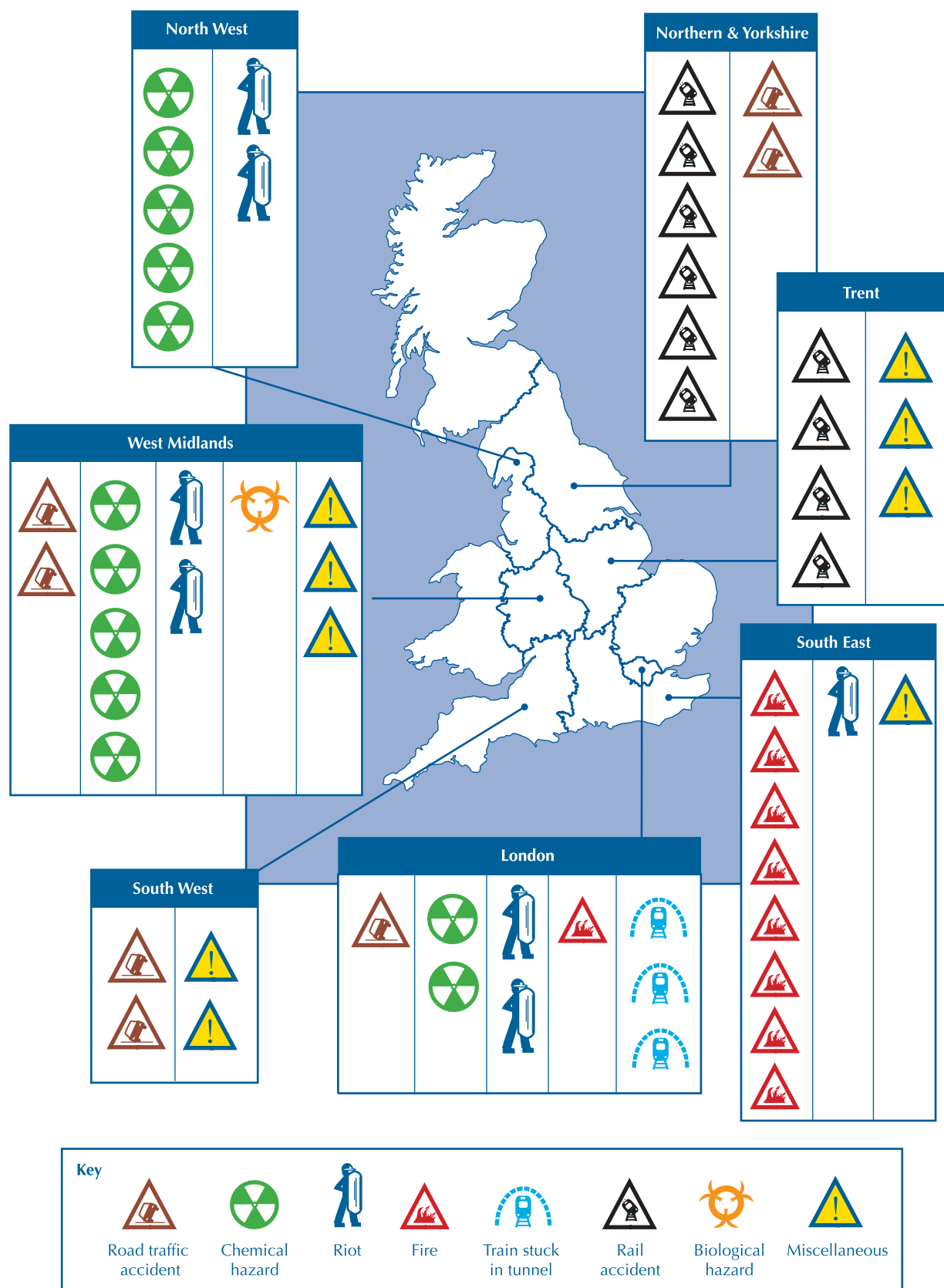
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Map – Major incident plan activations by acute trusts, ambulance trusts and health authorities for external incidents, January - August 2001



NOTE

Health authorities and NHS trusts in Eastern region did not activate their plans during Jan-Aug 2001. The number of trusts and health authorities responding to any one incident will depend on its nature and scale. The map shows the number of times NHS organisations activated their plans, not the number of actual incidents in the period.

summary & recommendations

Background

- 1 Major incidents range from road accidents and rail crashes to radiation incidents or the deliberate release of chemical or biological agents. In total health authorities, acute and ambulance trusts activated their major incident plans 118 times in 2000, and 86 times in the first 8 months of 2001, (see map opposite for external incidents in 2001). Terrorist attacks in the USA in September 2001 have increased the need for the NHS to be prepared to handle major incidents.
- 2 The Department of Health's Emergency Planning Co-ordination Unit leads NHS planning for major incidents in England. Following the changes to the health service in England in April 2002, emergency planning functions have progressively shifted from Health Authorities to Primary Care Trusts (PCTs), while the new Strategic Health Authorities have responsibility for co-ordination of response to widespread incidents. Ambulance and acute trusts provide medical care at the scene and subsequently, working alongside the other emergency services on the basis of their major incident plans.



- 3 We pay tribute to those who attend major incidents and provide treatment and care there and later. This report is not about these people but about the systems in place to ensure that the NHS response is as good as possible. Consequently, it is not about wider issues of emergency planning, which are being dealt with by other public service agencies.

Overall conclusions

- 4 Assessing preparedness to deal with major incidents is not straightforward. There is a scale of incident to which no NHS or other organisation could be expected to respond fully. Nevertheless, there are deficiencies in NHS planning arrangements. These existed before September 11 events, and though there have been improvements since, momentum needs to be maintained to deal with remaining weaknesses in planning and testing major incident plans, both in respect of the type of events experienced to date and for the newer threats of mass casualty, and biological, radiological and nuclear incidents.
- 5 We found good practice, but this needs to be identified and spread more systematically to address the deficiencies in the way that the NHS plans and prepares for major incidents. Arrangements in some other countries, for example Sweden, provide possible models, including the creation of a national incident database.

Departmental and regional input is generally effective but can be improved

- 6 The NHS regards good practice guidance issued by the Emergency Planning Co-ordination Unit as complete and useful. The Unit reacted swiftly after September 11, issuing comprehensive guidance across a range of hazards but some NHS trusts found the revised guidance issued then confusing and unco-ordinated. The Unit has since produced further guidance to address this, and is in a good position to further draw together and promulgate best practice and lessons drawn from actual incidents or tests.
- 7 Advice from regional level Health Emergency Planning Advisers to NHS trusts on planning for major incidents is seen as generally effective but their role is not sufficiently clear. The opportunity of Health Emergency Planning Advisers joining the proposed Health Protection Agency will bring about the possibility of clarification and standardisation of their role and responsibilities.

Inadequacies in health authority major incident planning need to be addressed by PCTs

- 8 Prior to the NHS reorganisation that took place in April 2002, health authorities had responsibilities for major incident planning which have now passed to PCTs. It is too soon to assess how well PCTs are fulfilling this new role, but many of the findings in relation to health authorities provide valuable lessons for the PCTs.
- 9 Before September 11 only half of health authorities had considered the impact of potential major incidents but since then most had done so. The quality of plans and preparedness improved after September 11, but coverage of chemical, biological and radioactive incidents was mixed, some plans were still out of date and there was scope to improve arrangements for working with other emergency organisations, such as the police and fire services. Importantly, one third of health authorities considered post September 11 that they did not test their plans frequently enough and nearly a fifth considered that their testing was not effective.
- 10 Post September 11, all except two health authorities were prepared for dealing with major incidents generally. However, readiness in respect specifically of chemical, biological, radiological or nuclear incidents was unsatisfactory (**Figure 1**).
- 11 Health authorities produced debriefing reports after exercises and most major incidents, but few were circulated widely. This limited the opportunity to share good practice and for others to learn lessons.
- 12 Health authorities were required to ensure that NHS trusts had suitable major incident plans and that they were ready to respond to major incidents. However, they had assessed only about 60 per cent of NHS trust plans. Some Health Emergency Planning Advisers took on this role and tests may in fact have been carried out.
- 13 Primary Care Trusts assumed statutory responsibility for major incident planning in October 2002, although transitional arrangements were in place since April 2002. Many of these trusts are new organisations and have a full agenda establishing themselves in their first year of operation. They will however need to give due priority to major incident planning activity and secure the necessary knowledge and skills. Otherwise, there is the risk that development of their own major incident plans and co-ordination of major incident planning with NHS trusts may suffer.



1 Health Authority preparedness as at February 2002

Aspect of major incident planning	Proportion not well prepared
Preparedness for:	
Biological incidents	5%
Chemical incidents	7%
Mass casualty incidents	12%
Radiological incidents	One fifth
Nuclear incidents	One quarter
Testing of plans - chemical, biological and mass casualty incidents not tested	One third
Testing of plans - radiological or nuclear incidents not tested	Four fifths
Where major incident plans had been tested, health authorities were not well prepared for radiological/nuclear incidents	One quarter
Training for radiological and nuclear incidents poor or very poor	One third

Source: NAO self-reporting survey of health authorities post September 11

Acute and ambulance trusts believe they are prepared to tackle major incidents but there are deficiencies in their planning and testing procedures and a significant number are not well prepared for post September 11 threats

- 14 Almost all acute and ambulance trusts regarded themselves as ready to tackle major incidents. Debriefing reports for actual incidents before September 11 support the view that NHS trusts were able to cope well with the range of major incidents experienced to date. All ambulance trusts test their major incident plans in line with guidance. However, about a third of acute and ambulance trusts reported that they had not tested their major incident plans frequently enough, and a quarter of acute trusts considered their testing was not very effective.
- 15 After September 11, many NHS trusts identified new or increased risks, mainly in relation to chemical, biological and mass casualty incidents. Most ambulance trusts had tested revised elements of their plans in these respects, though few acute trusts had. All ambulance trusts and all except two acute trusts, were prepared for major incidents in general. Preparedness for specific types of incidents (at February 2002) was worryingly low in many trusts (Figure 2).
- 16 At the request of the Department we undertook a further survey in October 2002 to establish what further progress had been made. As for our previous two surveys for this study, the Department was consulted and agreed with the design and content of the questionnaire; and all questionnaire returns were signed off by Trust Chief Executives to confirm that the contents represented an accurate picture. We obtained response rates of 63 and 80 per cent from acute and ambulance trusts respectively. However, visits to a small number of trusts to validate completed questionnaires showed they had all overstated, in key areas, their degree of preparedness to tackle major incidents, or could not provide evidence of claimed improvements since our survey in February 2002, and were basing their assessment, in part, on anticipated future developments. The October survey results showed continuing improvements in the preparedness of acute trusts to deal with most types of major incidents, (Figures 3 and 4). The main exception concerned preparedness to deal with radioactive incidents, for which

2 Trusts' preparedness as at February 2002

Aspect of major incident planning	Proportion not well prepared	
	Acute Trusts	Ambulance Trusts
Overall preparedness	One in six for mass casualty incidents. One fifth for chemical incidents. Around a third for biological and radiological incidents. One half for nuclear incidents.	One in ten for mass casualty incidents. Over one fifth for chemical incidents. One third for biological incidents. 4 out of 10 for radiological and nuclear incidents.
Personal protective equipment for chemical, biological and radiological incidents	Over one third	Over one half
Personal protective equipment for nuclear incidents	Over one half	Over one half
Decontamination facilities	Over one third	One half
Training in the use of equipment, and decontamination facilities	One half	One third

NOTE

The Department told us that at the time of our survey in February 2002, trusts would not have been able to significantly improve their preparedness related to personal protective equipment/decontamination and training as relevant procurement contracts did not come into operation until after then.

Source: NAO self completion survey of NHS Acute trusts, after September 11

3 Acute trusts' assessment of their preparedness as at February and October 2002

Type of incident	Well prepared %		Prepared %		Not well prepared %	
	Feb 2002	Oct 2002	Feb 2002	Oct 2002	Feb 2002	Oct 2002
General major incidents	58	66	41	34	1	0
Mass casualty	27	34	60	55	13	11
Chemical	8	17	72	65	20	18
Biological	8	13	65	65	27	22
Radioactive	6	13	65	50	29	37

NOTE

Results relate to the 91 trusts who responded to **both** the February and October 2002 surveys.

Source: NAO surveys of acute trusts February and October 2002. See Appendix H for definitions of categories.



4 Ambulance trusts' assessment of their preparedness as at February and October 2002

Type of incident	Well prepared %		Prepared %		Not well prepared %	
	Feb 2002	Oct 2002	Feb 2002	Oct 2002	Feb 2002	Oct 2002
	General major incidents	58	63	42	37	0
Mass casualty	26	30	65	61	9	9
Chemical	13	38	62	29	25	33
Biological	8	29	59	33	33	38
Radioactive	4	20	58	42	38	38

NOTE:

Results related to the 24 trusts who responded to *both* the February and October 2002 surveys, except for the mass casualty line which is based on 23 trusts. See Appendix H for definitions of categories.

Source: NAO surveys of ambulance trusts February and October 2002

there was an increase in acute trusts reporting themselves to be not well prepared from 29 per cent to 37 per cent. While the latest position for ambulance trusts also shows an increase in the proportion reporting themselves as well prepared for all categories of major incidents, the number of ambulance trusts not well prepared for chemical and biological incidents has increased.

- 17 Poor communications have been at the root of problems in past major incidents. About a fifth of acute trusts did not test their communications systems at six monthly intervals as required. Only a half of ambulance trusts tested their communications systems monthly as required. Many did not copy their plans to the fire service or the local ambulance service, which limits the extent to which there can be an effective co-ordinated response to a major incident. Moreover, the quality of debriefing reports produced was poor, with little evidence that they are used to improve plans; and few were circulated widely, including to the Emergency Planning Co-ordination Unit.
- 18 Handling the media is an increasingly important aspect in the management of major incidents. We found little evidence of testing of arrangements for handling the media, and many debriefing reports did not cover how well the media were handled during actual incidents. This indicates that such arrangements were not always given due consideration within the major incident planning process.

London is better prepared since September 11

- 19 London is now better prepared than before September 11 (Annex G). Preparedness for most types of incidents had improved substantially since our February 2002 survey. However, our October 2002 survey showed that a third of acute trusts and the London Ambulance Service were still not well prepared for incidents involving radioactivity. It also showed that whilst there have been improvements in capacity, particularly in respect of personal protective equipment and decontamination facilities, many issues remained and there was still much to be done. This, along with other important shortcomings in major incident planning (such as, training and testing of plans) means that a mass casualty incident or a hazardous substances incident on a large scale would challenge the NHS in London.



Recommendations

20 Being prepared for major incidents involves a balance between readiness for everything and the costs of preparing for events that may never occur. Judgements about this trade off are very difficult to make in the current post September 11 period but we make the following recommendations to cover issues that need early attention.

The Department of Health should:

- (a) Provide guidance on best practice processes for developing major incident plans and on what training should be undertaken by health service professionals involved in planning and responding to major incidents;
- (b) Pursue options for better knowledge management in planning for and reporting on major incidents. This should include better collection and dissemination of good practice and a national incident database;
- (c) Review the role of Health Emergency Planning Advisers to ensure they are uniformly effective across the country;
- (d) Ensure that Primary Care Trusts are fully aware of their new responsibilities for major incident planning, and have prepared major incident plans within six months of assuming major incident planning responsibilities;
- (e) Ensure that there are arrangements in place for assessing the quality of acute and ambulance trust major incident plans against standardised criteria;
- (f) Review the effectiveness and sufficiency of the current programme to improve resources for acute and ambulance trusts for dealing with major incidents and if necessary prepare a funded strategy to meet requirements in the light of a risk analysis;
- (g) Commission a training strategy for dealing particularly with major incidents associated with deliberate release of hazardous substances and facilitate its implementation for all key staff;
- (h) Underline, in the revised national guidance the Department intends to issue following the current review, the need for full testing of major incident plans, to a timetable and with subsequent evaluation;
- (i) Ensure that NHS organisations are fully collaborating with each other and with non-NHS organisations, such as the Police;
- (j) Ensure that all NHS organisations have an appropriate strategy for media communications, that it is fully tested as part of multiagency live and table top exercises, and that relevant staff are fully trained.

Acute and ambulance trusts

21 Chief Executives should take immediate steps to identify and address any deficiencies in NHS Trust major incident plans and ensure that they cover mass casualty, and chemical, biological, radiological and nuclear incidents. In particular Chief Executives should:

- (k) Ensure that major incident plans:
- have clear objectives;
 - are updated on a regular basis and reviewed annually;
 - clearly identify the type, level and location of resources needed;
 - include details of liaison arrangements, both internal and external, that may be implemented during a major incident;
 - are tested regularly, and within six months of any major revision and thereafter to a timetable; and
 - be signed off by them.
- (l) Examine urgently **inter-agency arrangements**, including with neighbouring trusts, other emergency services and managers of sites where there is a potential for serious incidents, in respect of mass casualty and chemical, biological, radiological and nuclear emergencies.
- (m) Improve **systems for learning and disseminating lessons** by producing debriefing reports after all major exercises and major incidents. They should identify and analyse key strengths and weaknesses, and spell out actions to be taken as a result, timescales for doing so and measures of success.
- (n) Improve **communication** arrangements and systems by ensuring that regular monthly (for ambulance services) and six monthly (for acute trusts) checks and reviews are carried out in accordance with Department of Health guidance.
- (o) Review and upgrade **training arrangements** for all appropriate staff, especially medical incident officers and emergency planning officers.
- (p) Ensure that a robust strategy for media communications is in place, is regularly tested, and that debriefing reports on incidents include media handling aspects.

Actions for Primary Care Trusts

- 22** Primary Care Trusts will fully take over the major incident planning responsibilities of health authorities during 2002. They have a demanding workload and organisational issues to address, but they will also need to undertake significant work if they are to ensure that they and the NHS trusts within their responsibility are prepared to deal with major incidents. The size of the task facing Primary Care Trusts points to the need for them to prioritise but the key points for them are to:
- (q) Take a fresh look to ensure that all hazards and risks in their locality are assessed in developing their own plans, as soon as is practicable after taking on major incident planning responsibilities;
- (r) Draw up a formal structured programme for the regular testing of their plans;
- (s) Identify those staff likely to be involved in dealing with a major incident and devise and implement appropriate training programmes; and
- (t) Produce debriefing reports after each significant test and each major incident.

Part 1

Background and Introduction

What is a major incident?

- 1.1 A major incident is any emergency that requires the implementation of special arrangements by one or more of the emergency services, the NHS, or the local authority. For the NHS, a major incident is any occurrence which presents a serious threat to the health of the community, disruption to the service, or causes (or is likely to cause) such numbers or types of casualties as to require special arrangements to be implemented by hospitals, ambulance services or health authorities (Primary Care Trusts from October 2002). In addition to the NHS, a number of agencies such as the fire service and the police are likely to be involved in responding to a major incident depending on the nature of the incident. Recent examples of major incidents include the rail crashes at Great Heck in February 2001 and at Potters Bar in May 2002. Terrorist attacks in the USA on 11 September 2001 point to the possibility of a wider range of major incidents.
- 1.2 There are no official figures for the total number of major incidents, but during 2000, health authorities, acute trusts and ambulance trusts activated their major incident plans 82 times for external incidents such as road and rail crashes, and 36 times for internal incidents - for example, hospital fires or power failures. Between 1998 and the first 8 months of 2001, the number had increased; for health authorities from 7 in 1998 to 16 in 2001; for acute trusts from 18 to 42; and, for ambulance trusts from 3 to 28. However, the number of activations may not equate to the number of major incidents as more than one organisation is likely to respond to an incident. The Potters Bar incident response involved activations by two acute trusts, one health authority, one ambulance trust and two Primary Care Trusts.

How the NHS plans and prepares for major incidents

- 1.3 A national handbook on major incident planning in the NHS was first issued by the Emergency Planning Co-ordination Unit of the Department of Health in 1990. It was updated in 1996 and comprehensively revised in 1998. It requires NHS organisations to identify hazards to the health of their population, assess

the likely impact, consider what can be done to minimise the risk, and prepare contingency plans. Guidance requires every health authority, acute and ambulance trust to have a major incident plan, to review it annually, and test it regularly. It also requires all appropriate staff to be properly trained and equipped to respond to the plan. The contents of a typical major incident plan are set out at **Figure 5**.

- 1.4 The Department of Health introduced a controls assurance standard on emergency planning in April 2000 to provide minimum standards for all health service organisations. The standard requires that the organisation "has planned and prepared an organised and practiced response to all major incidents and emergency situations which affect provision of normal services".

NHS Emergency Planning and response in England - who does what

- 1.5 **Figure 6** summarises the roles and responsibilities in respect of major incident planning that existed within the health service up until 1 April 2002. Annex A sets out the roles in more detail prior to the recent reorganisation of the NHS, and Annex B sets out organisational roles from October 2002, when PCT's assumed statutory responsibility for major incident planning. Before the reorganisation of the NHS, health authorities played a major role, which we examined.

Liaison with other emergency services and organisations

- 1.6 Depending on the nature of the incident, other responders include the fire service, police, local authority, armed forces, voluntary organisations and central government. **Figure 7 on page 12** illustrates the way in which the response to a major incident is typically organised at the scene. To ensure that major incident planning is well co-ordinated, NHS organisations are required to liaise regularly with all relevant key players, ensure respective major incident plans are complementary, regularly test and exercise plans jointly, and follow this up with thorough debriefing (Annex A).

5 Contents of a typical acute trust major incident plan

Chapter	Content
Aim of the plan	How major incidents will be dealt with
Role of the trust	Its likely role in various emergencies
Role of other organisations	Including NHS, other emergency services, private and voluntary sectors
Key operational principles	Main elements of the plan
Overview of key staff responsibilities	Roles of all staff likely to be involved
Alerting procedures and call out flow chart	Key communication processes
Patient flow in major incident	Covering incident victims as well as current inpatients and A&E admissions
Reconfiguration of hospital departments during incident	Key internal changes
Management of relatives and enquiries	Including setting up telephone hotline
Volunteers	Identification of organisations, individuals and their roles
Plan for mass casualty incident, chemical, biological, nuclear incident	Specific plans to deal with these risks
A&E local plan	Departmental plan specific to A&E staff
Departmental/individual action cards	Key instructions in easy reference form
Recovery plan and stand-down	Steps to be taken when incident is over
Plan update and dissemination	Procedures for keeping plan current and ensuring appropriate internal and external dissemination
Dealing with the media	Identification of spokesperson, handling sensitive information etc

NOTE

Health emergency planning takes place alongside the more general issue of contingency planning to maintain continued delivery of healthcare in the event of a variety of circumstances, for example, the disruption of fuel or power supplies.

Source: NAO examination of major incident plans

Why we studied major incident planning

1.7 The success of NHS major incident planning is an important one as lives are normally at risk. Our examination provided an opportunity to identify and spread good practice. The prominence of the subject has increased significantly since 11 September 2001 and this report provides the basis for a timely stocktake.

Scope of the study

1.8 We examined the Department of Health's arrangements for ensuring the effectiveness of NHS major incident planning and the arrangements in health authorities, acute trusts, and ambulance trusts to prepare for possible major incidents. We extended our study following the terrorist attacks in the USA on 11 September 2001 to assess whether there have been changes resulting in improved preparedness, and undertook a snapshot survey of acute and ambulance trusts in October 2002 to assess the latest position.

1.9 This report does not examine the wider government response to emergency planning. The Defence Select Committee has reviewed these and other aspects of emergency planning and the roles of a number of key government departments, the emergency services and local authorities.

Methodology

1.10 Our methodology is set out in detail in Annex H. The main features are:

- discussions with the Emergency Planning Co-ordination Unit to identify its role and responsibility for emergency planning;
- surveys of all health authorities, acute trusts and ambulance trusts to examine their procedures for major incident planning before and after 11 September 2001. We obtained good response rates though, even after reminders, a small minority of health bodies did not respond. These surveys were carried out in August 2001 and then following events

6 NHS Emergency Planning - prior to October 2002

The Department of Health

Emergency Planning Coordination Unit (EPCU)

- develops, issues and maintains national guidance
- facilitates training in major incident preparedness
- makes sure lessons learned from incidents and exercises are applied
- liaises with DH and with other government departments
- provides national coordination if needed in response to a major incident.

NHS Executive Regional Office (up to April 2002)

- ensures that health services in their region have plans which are compatible with other major incident responders and conform to national guidance
- provides advice on all aspects of emergency planning, including:
 - hazard identification and risk assessment
 - preparation of plans
 - training
 - exercising plans
 - review and evaluation
- provides regional coordination if needed
- ensures a regional contribution to national contingency arrangements.

The Regional Director has overall responsibility for emergency planning. Responsibilities are usually delegated to The Director of Public Health. The day-to-day work is carried out by the Health Emergency Planning Advisors.

Health Emergency Planning Advisors (HEPAs)

Deal with all aspects of emergency planning and emergency response on behalf of the regional office. This includes:

- identifying hazards across the region
- planning with the NHS and other agencies
- training, exercising plans
- reporting
- performance monitoring.

The NHS

Health Authorities

Health authorities are responsible for ensuring they have their own major incident plans. They provide:

- 24-hour corporate response
- performance management of providers
- coordination and advice
- financial resources.

The chief executive has overall responsibility for the health authority's own response to major incidents and for ensuring that trusts within its boundaries have adequate major incident plans. The responsibilities within the health authority may be delegated as appropriate to:

- the Director of Public Health
- a Consultant in Communicable Disease Control
- any other adequately trained and experienced health authority official.

Receiving hospitals

Receiving hospitals are responsible for providing:

- reception of casualties in A&E
- back-up facilities in the rest of hospital
- mobile medical team
- medical incident officer (unless other local arrangements are agreed)
- counselling and support in partnership with other agencies.

Ambulance service

The ambulance service should:

- assess the incident
- identify and activate resources
- manage and coordinate NHS activity at the scene
- provide NHS communications
- extricate (medical), triage, stabilise and transport casualties.

Primary and community services

They provide services in the community, in or close to people's homes. After a major incident they enable people rapidly to access care and support. Roles include:

- direct care and advice to people affected
- care in hospitals or in community
- social and psychological care in support of support services
- health screening and continuing care information and advice to public.

NHS plans must relate to the emergency plans of other responding agencies, eg. local authorities, police and fire services.

7 How the response is typically organised at the scene of a major incident



NOTE

Configurations may vary in different parts of the country, depending on local arrangements. For example, control centres may not be shared by the Police, Fire, Ambulance Services and other appropriate response organisations.

Source: Adapted from *Dealing with Disaster (Third Edition)*

of 11 September 2001, in February 2002. At the request of the Department of Health we undertook a further limited 'snapshot' survey of acute and ambulance trusts in October 2002 to capture any further developments in their preparedness for tackling major incidents. Response rates to this survey were sufficient for us to draw conclusions, but lower than for the first two surveys, (63 and 80 per cent for acute and ambulance trusts respectively). A small number of site visits were undertaken to validate the October 2002 survey results.

- a review of the quality and content of major incident plans of health authorities, acute trusts and ambulance trusts;
- visits to NHS regions to interview Health Emergency Planning Advisors, the fire service, police and local authority to assess the extent of co-ordinated working between the NHS and other emergency services;
- views of key voluntary organisations;
- a literature review;
- review of major incident planning in the USA and Sweden (Annex D).

1.11 Assessing readiness to respond to a major incident is not straightforward. While it is possible to ask for views in relation to particular types of major incident, these were of an unspecified nature, and some trusts may have had different scenarios in mind when replying, and in particular extreme ones. There is a scale of incident to which the NHS could not be expected to respond fully, acting alone or with other organisations. There may therefore be a degree of subjectivity in the self-assessments of readiness reported to us in particular as the response categories - "well prepared", "prepared" and "not well prepared" were not defined precisely. To allow for this, the other elements in the methodology above were designed to provide more focused evidence, including for example the independent review of the quality of major incident plans.

Part 2

The effectiveness of major incident planning at the strategic level

2.1 This part of our report looks at the performance of the two key players in major incident planning at the strategic level: the Emergency Planning Co-ordination Unit and Health Emergency Planning Advisors.

2.2 The Emergency Planning Co-ordination Unit is responsible for:

- National guidance and facilitating training;
- Liaison and spreading good practice; and
- Providing national co-ordination if needed.

2.3 Health Emergency Planning advisors within regions are responsible for:

- Identifying hazards;
- Planning;
- Training, exercising and reporting; and
- Performance monitoring.

The Department of Health has provided useful guidance, and most health authorities and trusts rated new guidance issued after September 11 as at least adequate

2.4 The Emergency Planning Co-ordination Unit of the Department of Health issued revised guidance on planning for major incidents in 1998, and most health authorities and trusts rated its completeness and usefulness as good or very good.

2.5 After the attacks in the USA on 11 September 2001, the UK Department of Health took stock of major incident planning mechanisms in the NHS. It considered there was a need to produce comprehensive and carefully considered guidance that did not cause unnecessary concerns within the NHS or the public, was on a need to know basis, and took account of changing threats.

The main items of guidance issued by the Department since September 2001 are shown in Annex C. The Department of Health issued on a need to know basis new guidance through Regional Directors of Public Health, and Health Emergency Planning Advisors, to those with responsibility for emergency planning in health authorities and NHS trusts during September and October 2001 drawing on lessons from the USA. All health authorities and NHS trusts were to review their extant major incident plans and make changes where necessary.

2.6 Most NHS trusts told us they had seen the guidance. At the time of our survey, in February 2002, out of 76 health authorities and 155 responding acute trusts:

- four health authorities and 19 acute trusts reported they had not seen the guidance on mass casualties;
- ten health authorities and seven acute trusts reported they had not seen the chemical incident response guidance; and
- one health authority and six acute trusts reported they had not seen the guidance on deliberate release of biological, chemical and radiological agents.

2.7 Most trusts and health authorities who had seen the guidance rated it as at least adequate, but a significant minority (16 and 27 per cent of acute and ambulance trusts, respectively, and 20 per cent of health authorities) thought it poor or very poor. Comments made to us included that the new guidance was not sufficiently explicit and that it was disjointed, confusing and unco-ordinated.

2.8 The revised guidance on major incidents issued by the Unit in 1998 is very much concerned with good practice and has been widely disseminated. In addition, the Unit maintains a website containing some examples of good practice, mainly concerned with the preparation and presentation of major incident plans. Good practice is also promoted through the controls assurance process launched in 2001.

2.9 However, the Unit plays little part in further co-ordinating and spreading best practice across the country, and accepts that there would be benefit in pursuing better knowledge management in the NHS regarding planning for, and reporting of major incidents. In particular, there is little dissemination of good practice or lessons learned from major incidents or the testing of major incident plans. For example, 86 per cent of health authorities told us that they learned of good practice from other parties, mainly from County Councils, using it to improve their preparedness. Only one health authority and four acute trusts told us they learned of good practice from the Unit. The Unit does not maintain a database of major incidents from which to derive good practice lessons that could be fed back to NHS trusts, though there are some practical difficulties as most debriefings are multi-agency. Arrangements in Sweden, Annex D, illustrate one possible approach.

Health Emergency Planning Advisors are seen as generally effective but their role is not sufficiently clear

2.10 Health Emergency Planning Advisors provide major incident planning advice on hazard identification, planning, training, exercising and reporting. Whilst there is a national description of the functions of the (Regional) Health Emergency Planning Advisors (HEPAs), we found significantly different approaches. Most regions have one advisor, with the exception of the South East (three) and London (four). Currently there seems to be little connection between the number of advisors and the size of the local population, risk assessment, and number of NHS organisations within a region, in view of the areas of each Regional Director of Public Health's responsibility.

2.11 Some two-thirds of acute trusts and almost all ambulance trusts regarded liaison with Health Emergency Planning Advisors as good or very good. There was, however, significant regional variation among acute trusts: 89 per cent in London regarded liaison as good or very good compared to only 33 per cent in Eastern Region.

2.12 Health Emergency Planning Advisors were required to disseminate to health authorities and trusts guidance issued by the Department of Health following the events of September 11. They used different approaches to ensure that health authorities, trusts and others understood the requirements of the guidance. Methods included issuing briefing reports, arranging workshops, increasing local training on chemical and biological terrorism incidents, setting up working groups involving fire, police and local authorities, and holding tabletop exercises, designed to simulate a real major incident. In addition, most Advisors sent the actual guidance to health authorities and trusts in their regions, but only three (Eastern, North West and Trent) explicitly asked all trusts to review their major incident plans in the light of the guidance.

Part 3

The preparedness of health authorities

3.1 Prior to 1 April 2002, 95 health authorities were responsible for preparing and reviewing their major incident plans and training staff. They also provided a strategic view on long-term threats and their possible impact, as well as ensuring that NHS trusts had adequate major incident plans and were tested. We received 88 health authority responses to our survey pre September 11 and 76 afterwards. Health authority major incident planning responsibilities have now been passed to Primary Care Trusts (PCTs). It is too soon to review how well the PCTs are carrying out their responsibilities but our findings will be highly relevant to them.

Most health authorities had carried out a strategic view of threats and impact assessment

3.2 Before September 11 only around half of health authorities replying to our survey told us they had undertaken a strategic review of threats, and assessed the impact of potential major incidents. Few copied them to other key players. After September 11 over 90 per cent of respondents had either carried out a strategic review and impact assessment for the first time or reviewed an earlier assessment.

The quality of plans has improved since September 11 but there were still a number of shortcomings

3.3 Our consultants reviewed health authority plans prior to September 11 against criteria agreed with the Department of Health (Annex F). The criteria represent good practice to which health organisations should perform as closely as possible; full compliance would achieve a score of 100 per cent. To reflect their relative importance some criteria were weighted more than others. Overall, health authorities scored an average of 53 per cent. At the time of our survey in August 2001, though no health authority fully met all the criteria, 14 out of 72 authorities scored more than 75 per cent.

3.4 After September 11 the Department required health authorities to review and, if necessary, revise their major incident plans in the light of the new guidance it issued on mass casualties and deliberate release of chemical, biological and radiological agents. Whilst almost all health authorities had reviewed their plans in the light of this guidance, not all had revised them to include key elements. For example, at the time of our survey in February 2002, a quarter had not included arrangements for a mass casualty incident (including a third of the London health authorities and 46 per cent in the North West), and 30 per cent had not included back-up communications arrangements in their plans, a lesson specifically highlighted in the September 11 response effort in the USA.

3.5 Our comparison of plans pre and post the new guidance (Annex F) showed that plans had improved in quality, with the average scores against most of the criteria increasing, **Figure 8**. Two-thirds of plans were reasonably clear and unambiguous. The most notable improvement was in compliance with national guidance, indicating that health authorities had looked carefully at their role and responded to current needs. However, coverage of chemical, biological and radioactive incidents was mixed - some plans covered this well, whilst others only provided copies of the most recent guidance. Very few health authority plans covered both external and internal incidents or fully identified hazards and the level of risk. Health authorities still scored poorly in terms of updating their plans, and in terms of relationships with external organisations (a third of the sample scoring zero), indicating a continued lack of understanding of the need to work closely with other organisations. Overall scores in our sample ranged from zero (Leicestershire and Liverpool Health Authorities - for which our consultants judged that the plans met none of the criteria) to 90 per cent (Avon, Tees and Nottingham), **Figure 9**.

8 Comparison of health authority major incident plan scores before and after September 11 showed some improvement overall

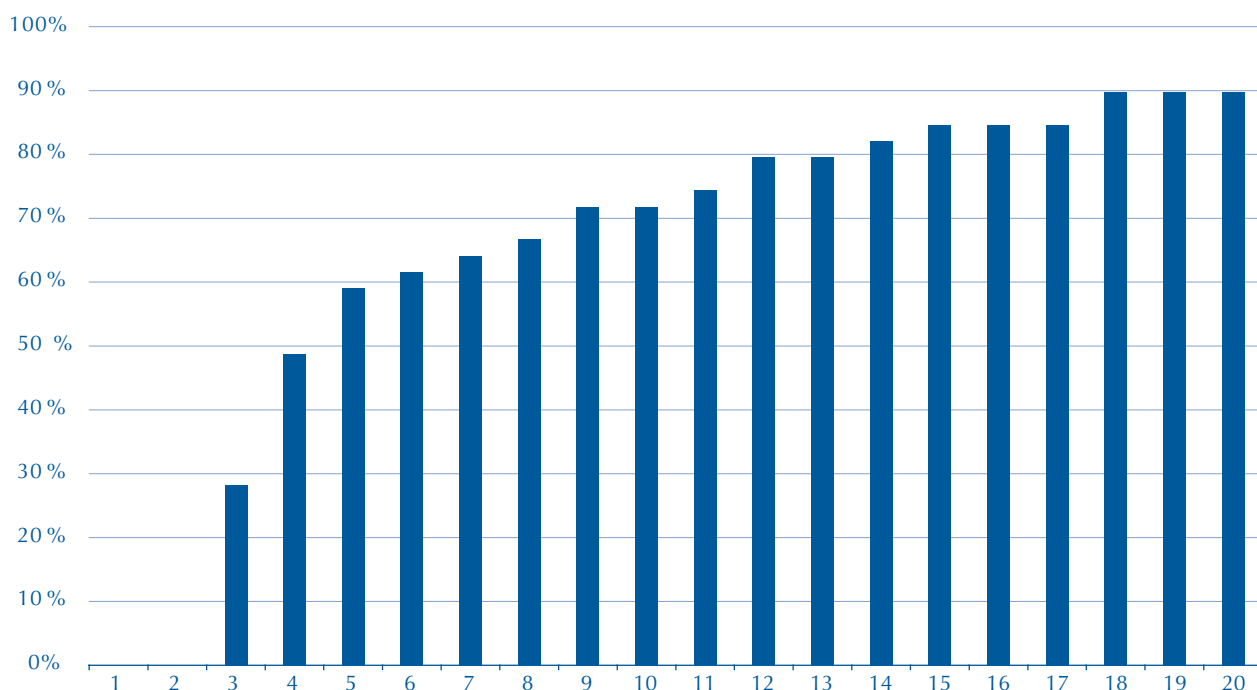
Criteria category	Pre September 11 average score for 72 plans (%) ¹	Pre September 11 average score for 19 plans (%) ²	Post September 11 average score for 19 plans (%) ²
There are processes to keep the plan up to date	42	41	48
It incorporates all elements of the health authority's response as outlined in national guidance	55	46	79
The plan is flexible	58	53	68
The plan is clear, unambiguous and easy to use	62	46	65
Plan covers relationship to external organisations	40	29	42
Average scores	53	45	66

NOTES

1. The first review covered all 72 plans sent to us.
2. We asked health authorities to send us plans revised after September 11 and received 20 plans. Of these, 19 health authorities had also sent us their pre-September 11 plans.

Source: Independent review carried out for the NAO of major incident plans

9 Health Authority revised major incident plan scores



Source: NAO commissioned independent review of 20 health authority major incident plans revised after September 11, received by the NAO

There were gaps in the testing of health authority major incident plans

- 3.6 Major incident plans become unreliable if they are not tested regularly. The majority of health authorities carried out some testing of their plans, with eighty-five per cent of those responding to our survey telling us that they undertook tabletop exercises, and about three-quarters carrying out multi-agency live testing with other organisations such as the fire service or police, at frequencies ranging from one to three years. However, one-third of health authorities considered that the frequency of their testing was insufficient, and 18 per cent that their testing was not very effective.
- 3.7 Following September 11 events, between a third to half of health authorities that revised their major incident plans to reflect new or increased risks in respect of chemical, biological, and mass casualty incidents had already tested them through tabletop exercises, **Figure 10**. However, less than 10 per cent had done so in respect of their radiological and nuclear incident plans. In part this was probably due to a greater focus on higher perceived risks for chemical and biological threats, and the difficulty for many health authorities to initiate nuclear and radiological tests.

The results of testing showed that significant numbers of health authorities were not well prepared for post September 11 threats

- 3.8 Of those health authorities which tested their specific plans, almost all believed they were prepared or well prepared for chemical incidents. However, between 20 and 30 per cent were not well prepared for biological,

mass casualty, radiological and nuclear incidents. The main difficulties were inadequate access to mass decontamination and protective clothing, a need for improved training, and a requirement for better liaison with police, local authority and other organisations. However, the Department told us that at the time of our survey in February 2002, health authorities would not have been able to significantly improve their preparedness relating to decontamination equipment and protective clothing as relevant procurement contracts did not come into operation until after that date.

Spreading good practice

- 3.9 One of the key purposes of preparing and circulating debriefing reports after simulation exercises and actual major incidents is to ensure that lessons are learned and that good practice is shared and used to improve preparedness. To enable this debriefing reports need to set out clearly what worked well and less well, highlight the main lessons and set out any changes required to major incident plans to improve preparedness.
- 3.10 Debriefing reports were prepared (before and after September 11) by health authorities after most multi-agency live exercises and most major incidents, and after two-thirds of tabletop exercises. Our review of those produced showed that quality was generally poor, with few bringing out the key messages. Few were circulated outside the health authority, including less than 30 per cent to the Emergency Planning Co-ordination Unit. Not all debriefing reports would contain messages sufficiently important to pass on to the centre, but health authorities were in a position to take an overview, and we would have expected this proportion to be higher.

10 Percentage of health authorities testing their revised major incident plans after September 11

	Chemical incident	Biological incident	Nuclear incident	Radiological incident	Mass Casualty incident
Through a multi-agency live exercise	17	16	6	5	7
Through an internal live exercise	7	15	3	3	8
Through a table-top exercise	35	44	8	8	49

NOTE

Some health authorities may have undertaken more than one type of test.

Source: NAO survey of health authorities post September 11 (February 2002)

Handling of the media can be improved

3.11 Guidance required all health authorities to make arrangements for liaising with the media in the event of a major incident. Our examination of debrief reports following major incidents showed cases where press statements had been released, usually by other emergency services, without consultation with the appropriate health authority public health consultant, and this had led to inappropriate health advice being given to the public. This reinforces the need to have robust media handling arrangements in place and to test them.

Not all health authority staff were adequately trained to deal with a major incident

3.12 Health authorities were required to have a training programme for staff likely to be involved in responding to a major incident. However, (before September 11) 63 per cent reported that all relevant staff had received what they considered to be sufficient or fully sufficient training, and over a third considered training to be insufficient.

3.13 Each health authority Emergency Planning Officer was responsible for all aspects of major incident planning including writing, updating and testing the plan, staff training, liaison with other emergency responders and managing incidents. Post September 11, almost all health authorities considered the training of their emergency planning officers in managing general incidents was at least adequate, but around a third viewed training in radiological and nuclear incidents as poor or very poor. The situation was worse in London health authorities, where two-thirds considered training in dealing with both radiological and nuclear incidents to be poor or very poor. The main problems identified by health authorities were a lack of time to attend training courses and a lack of training for support staff.

Health authorities adequately supervised only about half of NHS trust major incident plans

3.14 Health authorities were required to ensure that acute trusts had suitable major incident plans and that they prepared for their roles, reviewed and exercised their plans and collaborated with other agencies likely to be involved in any response. Health authorities told us that they assessed the adequacy of only just over half of trust plans, mainly against Department of Health guidance. They also used over 50 different types of assessment criteria, risking inconsistency in approach. Around a third of health authorities told us that the trusts for which they were responsible assessed their own plans, and for

39 acute trusts and 27 ambulance trusts, the health authorities were unable to tell us when their major incident plan had last been reviewed.

3.15 Some 70 per cent of health authorities had taken steps to ensure that acute trusts collaborated and liaised with appropriate organisations, including the police and fire service, mainly through ensuring that they participated in multi-agency co-ordinating groups or emergency planning forums. Around 60 per cent ensured that trusts exercised their plans regularly, but for 72 acute trusts, and 32 ambulance trusts, health authorities were unable to tell us when their major incident plan had last been tested. Some Health Emergency Planning Advisors took on this role, and testing may have taken place in any case, however.

There was scope for closer liaison between health authorities and non-NHS organisations

3.16 Health authorities were expected to liaise with other organisations likely to be involved in a major incident response, including the range of emergency services. Between 94 per cent and 100 per cent of health authorities, **Figure 11**, considered liaison to be at least 'adequate' with the police, local trusts, the ambulance service, neighbouring health authorities and local authorities. Liaison had been less effective with the voluntary sector where 33 per cent of health authorities rated liaison as 'poor' or 'very poor', with primary care trusts (19 per cent), with the fire service (11 per cent) and with high potential incident impact organisations such as nuclear installations (9 per cent). These are important liaison aspects for PCTs to bear in mind.

3.17 Liaison with the police is particularly important as they have the lead co-ordinating role at the scene of an incident. However, nearly 40 per cent of responding health authorities had not sent copies of their current plans to the local police service, a fifth had not participated in exercises carried out by the police and, more importantly, a fifth had not agreed their mass casualty plans with the police since September 11.

Most health authorities said they were better prepared post September 11 but problems remained

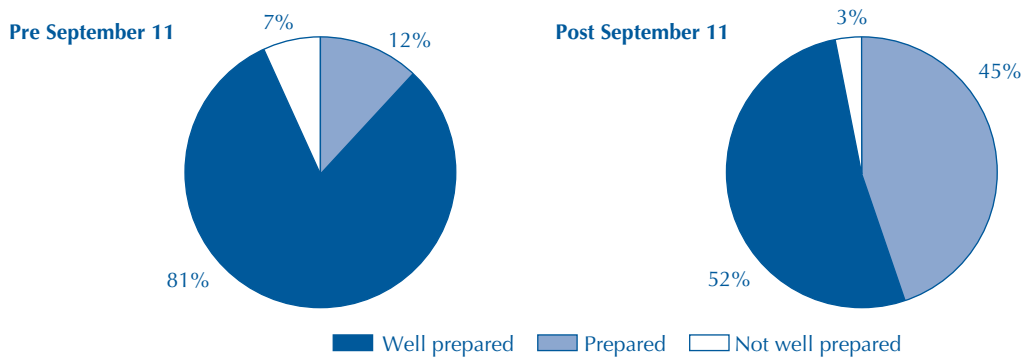
3.18 In our survey prior to September 11, most health authorities told us they were prepared or well prepared in respect of major incidents in general. The position improved in our post September 11 survey - only two health authorities were not well prepared, **Figure 12**. However up to a quarter of health authorities considered themselves not well prepared for mass casualty incidents, radiological incidents and nuclear incidents, see **Figure 13**.

11 The extent of liaison between health authorities and external organisations

External organisation	Percentage of health authorities rating liaison		
	good or very good	adequate	poor or very poor
Local trusts	79	19	2
Ambulance trusts	78	19	3
Police	71	23	6
Fire service	62	27	11
Local authorities	82	18	0
Voluntary sector	22	44	33
Neighbouring health authorities	59	40	1
Primary care trusts	40	41	19
Local high potential incident impact organisations	46	45	9

Source: NAO self-reporting survey of health authorities pre September 11 (August 2001)

12 Health Authority preparedness for major incidents in general



Source: NAO self reporting surveys of health authorities pre and post September 11, (August 2001 and February 2002)

13 Health authorities' assessment of their preparedness for a range of major incidents post September 11

Type of incident	Percentage 'well prepared'	Percentage 'prepared'	Percentage 'not well prepared'
General major incidents	45	52	3
Mass casualty	19	69	12
Chemical	33	60	7
Biological	28	67	5
Radiological	12	68	20
Nuclear	11	64	25

Source: NAO self-reporting survey of health authorities post, February 2002

Health authority preparedness varied by region

3.19 Analysis of preparedness to tackle major incidents after September 11, (Figure 14), shows that all health authorities in every region apart from Northern & Yorkshire and London (Annex G) were prepared or well prepared to tackle general major incidents. With regard to mass casualty, chemical, biological, radiological and nuclear incidents there was wider variation, ranging from the South East where all health authorities were prepared or well prepared, to West Midlands, Northern & Yorkshire and London where up to 50 per cent of health authorities were not.

The transfer of major incident planning responsibilities from health authorities to Primary Care Trusts may present risks

3.20 NHS reorganisation in April 2002 resulted in the transfer of health authority major incident planning responsibilities to Primary Care Trusts. Many of these trusts are new organisations and have a full agenda establishing themselves in their first full year of operation. Despite this, they will need to secure the required knowledge and skills to take on major incident planning activity, as well as the necessary resources.

14 Regional analysis of health authority preparedness

	General major Incidents	Mass casualty Incidents	Chemical Incidents	Biological Incidents	Radiological Incidents	Nuclear Incidents
West Midlands	100	92	77	92	69	54
South West	100	86	100	86	100	100
South East	100	100	100	100	100	100
Northern & Yorkshire	87	87	89	89	78	67
Eastern	100	100	100	100	100	80
London	92	83	92	92	50	50
North West	100	77	100	100	92	92
Trent	100	90	100	100	80	80

● Over 50% not well prepared
 ● 50% or under not well prepared
 ● All prepared or well prepared

NOTE

The numbers reflect the percentage of health authorities 'prepared' or 'well prepared' in each region and category.

Source: NAO self-reported survey of health authorities post September 11

Part 4

The preparedness of acute trusts

4.1 Acute trusts are at the heart of the NHS response to major incidents, providing staff to treat victims at the incident scene and then providing care and treatment in their hospitals. We received 164 responses from 189 acute trusts for our survey before September 11, and 155 responses from 180 acute trusts in existence in March 2002. We had a 63 per cent response rate to our 'snapshot' survey in October 2002.

Most acute trusts based their major incident plans on a formal assessment of hazards and risks but weaknesses in acute trust planning procedures remain

- 4.2 Acute trusts are required to have a major incident plan that considers, and is flexible enough to meet, all foreseeable causes of a major incident. Prior to September 11 around half based their plan on a formal assessment of hazards and risks. Since then many assessments have been undertaken for the first time or reviewed. By April 2002 only nine acute trusts responding to our survey had still to carry out a risk assessment of some sort. Around two-thirds of acute trusts reflected the new or revised risk assessment through amendments to their major incident plans.
- 4.3 NHS acute trust major incident plans should be reviewed annually but 28 per cent were reviewed only every two to five years. Those responsible for the review were mainly individuals directly responsible for planning but included a small number unlikely to have any real insight into major incident planning procedures, such as a switchboard supervisor and a patient records manager.
- 4.4 Within each acute trust, full or summary major incident plans were copied internally to most departments, including accident and emergency, and to Medical Incident Officers. Three quarters of acute trusts also copied their plans to the police but 40 per cent had not copied their plans to the fire service, nearly half did not

do so to neighbouring acute trusts, and 13 per cent to the ambulance service. This risks unco-ordinated responses and 'making the best of things' in the event of an incident, particularly if a cross-border response is required.

NHS acute trust major incident plans had important deficiencies

- 4.5 We reviewed all 116 plans produced before September 11, sent to us in response to our survey, against criteria agreed with the Department of Health. The average score was 61 per cent, with 30 acute trusts scoring 75 per cent or above. Many plans were more than three years old, or did not cover internal incidents, and there was little evidence of the use of Emergency Planning Co-ordination Unit guidance or of review. Coverage of relationships with other organisations was also variable. However, we identified around ten excellent plans, which showed that there had been a thorough review of hazards faced and a proper assessment of the trust's required response. **Figure 15** sets out the main elements of good practice that led to better planning.
- 4.6 All acute trusts were expected to review their plan and, if appropriate, revise it, in the light of the post-September 11 guidance from the Department of Health. Whilst the majority had done so, almost a quarter had not against the guidance on mass casualties, and 14 per cent in the light of the guidance on chemical incident response or deliberate release, sometimes reporting they had not seen it.
- 4.7 Many of those reviewing their plans subsequently revised them, but in many acute trusts, plans still did not include key elements of the new guidance, **Figure 16**. Our 'snapshot' survey in October 2002 indicated that around a quarter of acute trusts still do not include arrangements for dealing with biological and radioactive (including radiological and nuclear) incidents in their plans.

15 Good practice identified by acute trusts as helping to improve the major incident planning process

- Sending health authorities, acute trusts and local authorities on joint training courses
- Keeping the major incident plan as close to normal working practice as possible
- Early and accurate communication in the planning process
- Involving all key staff in planning
- Multi-agency planning
- Include major incident planning seminars in first year of clinical training
- Need for clearly identifiable leadership
- Participation in multi-agency exercises followed by debriefing
- Major incident plans need to be user-friendly and readily available
- Need for a simple plan, with the ability to respond flexibly
- Widen the sense of ownership of the plan beyond A&E
- Exercises should be focused on an appraisal of what didn't work in the previous exercise/incident
- Plan for regular, smaller scale tests
- Create an emergency planning master plan to provide common structure for all incidents
- Lateral thinking and brainstorming is important during planning
- Greater involvement of consultants
- Annual statutory training programme
- Sharing information across the hospital
- Annual review process of systems, equipment and procedures
- Make it fun and almost routine

Source: NAO survey of acute trusts pre September 11 (August 2001)

16 Key elements of major incident planning guidance are not fully incorporated into acute trust major incident plans revised after September 11

Guidance element	Percentage of acute trusts not including it in their major incident plans
What to do in the event of a mass casualty incident	44
Availability, access and use of equipment	30
Alternative arrangements in the event of transport disruption	71
Alternative arrangements in the event of communications failure	36

Source: NAO survey of acute trusts post September 11 (February 2002)

4.8 A comparison (**Figure 17**) of pre and post September 11 plans of 22 acute trusts (Annex F) shows improvement against one of the five criteria. But overall scores decreased mainly because of much poorer scores for plan flexibility and consultation and relationships with external organisations - particularly important for planning against the eventuality of a mass casualty incident.

4.9 Specific problems were that:

- though acute trusts had almost all carried out some kind of risk analysis, they were not based on a sufficiently comprehensive hazard and risk assessment;
- mutual aid arrangements to enable trusts to work in collaboration with others were missing in the majority of plans reviewed;

- communications and transport disruption or failure was not addressed in the plans;
- in the majority of cases examined Emergency Planning Co-ordination Unit guidance was used as annexes to plans rather addressed within the plan itself;
- the majority of plans did not address internal major incidents; and
- few plans addressed chemical, biological and radiological incidents.

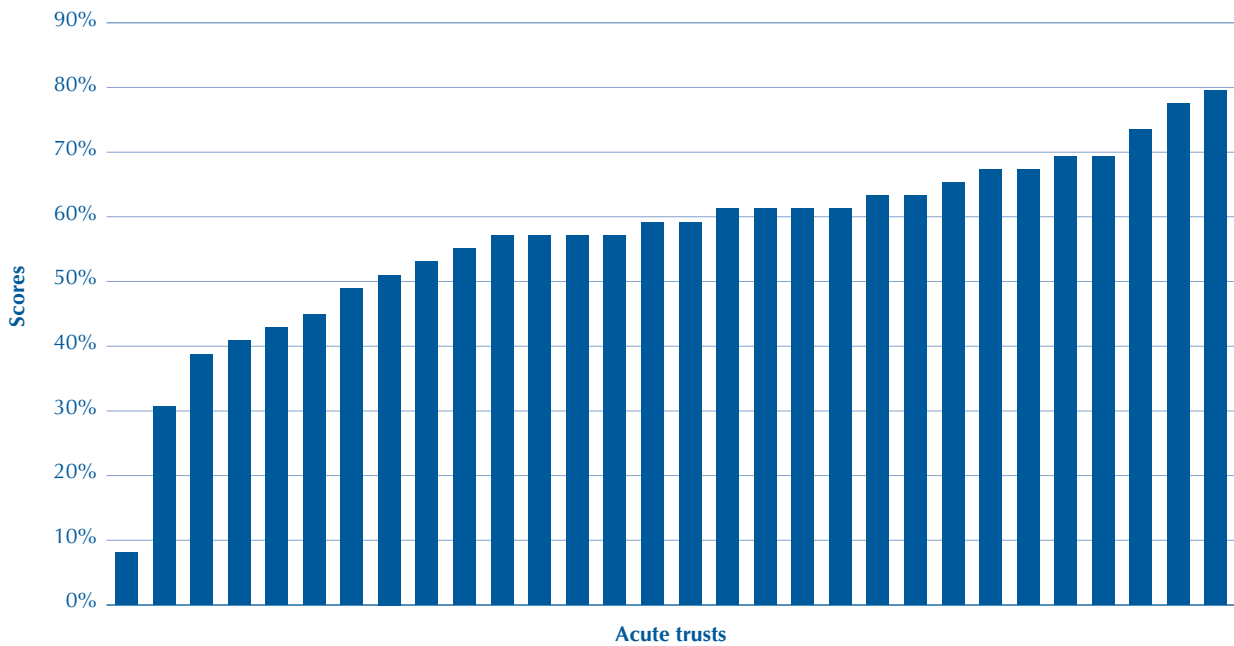
4.10 Scores for the individual acute trusts against the review criteria ranged from 8 per cent (Queens Medical Centre) to 80 per cent (Ashford & St Peters), with only two of the thirty trusts scoring more than 75 per cent, **Figure 18**.

17 Overall comparison of acute trust plans scores before and after September 11

Criteria category	Pre September 11 average score for 116 plans (%)	Pre September 11 average score for 22 plans (%)	Post September 11 average score for 22 plans (%)
There are processes to keep the Plan up to date	39	48	43
It incorporates all elements of the health authority's response as outlined in national guidance	69	70	66
The plan is flexible	48	56	33
The plan is clear, unambiguous and easy to use	73	66	76
Plan covers relationship to external organisations	38	32	7
Average scores	61	63	56

Source: Independent review carried out for the NAO of major incident plans. The first pre-September 11 review consisted of all 116 plans sent to us in August 2001. In February 2002 we received 30 plans revised after September 11. Of these, 22 had also sent us their pre-September 11 plans.

18 Acute trust revised major incident plan scores



Source: Independent review for the NAO of acute trust major incident plans post September 11

Lack of testing of major incident plans calls preparedness into question, particularly in the light of events of September 11

4.11 Acute trusts are required to test their communications every six months, and participate in a live multi-agency exercise at least every three years. We found that 17 per cent of acute trusts did not test their communication systems (including one third of acute trusts in Eastern region), and that around half did not participate in any multi-agency live testing. Around half of acute trusts considered that they do not test their major incident plans frequently enough to ensure that they remain effective and up-to-date, and a quarter said their testing was not very effective, in both cases mainly because of time pressures and lack of resources.

4.12 In response to post-September 11 threats, our survey in February 2002 found that:

- only 1 in 3 acute trusts had so far tested their mass casualty and chemical incident plans;
- less than 1 in 5 had so far tested their biological incident plans;
- less than 1 in 10 had so far tested their nuclear or radiological plans; and
- nearly 3 in 4 in London and 95 per cent in the South East had not yet tested their chemical or biological incident plans.

We did not obtain sufficient information from our October 2002 survey to draw any conclusions about changes since February 2002.

Debriefing could be carried out better and the results used more

4.13 Emergency Planning Co-ordination Unit guidance requires a thorough debrief after major exercises and major incidents, so that lessons learned can be analysed and, if appropriate, incorporated into the trust's plan. This should also assist in the sharing of good practice in handling major incidents, and reduce recurrences.

4.14 Prior to September 11, most acute trusts produced debriefing reports after major exercises, and 70 per cent did so after major incidents. We asked trusts to let us have debriefing reports but received only a limited number. Our review of them found that they were generally poorly constructed and failed to identify the output of the exercise or incident in qualitative or quantitative terms. They concentrated on the performance of the trust without any direct consideration of whether plans were activated

effectively or if they performed in a way that enabled the plan's objectives to be met. They also tended to lack objectivity in identifying areas that posed difficulties. Our review of major incident plans showed little evidence that aspects of the debriefing reports had been incorporated. Debriefing reports following exercises or major incidents were not widely circulated by acute trusts to others to enable good practice and lessons learned to be shared.

Media handling arrangements could be better integrated in the major incident planning process

4.15 Our examination of debriefing reports following exercises mostly showed no evidence that procedures for handling the media were tested, even in multi-agency live exercises. Furthermore, the majority of debriefing reports of actual incidents did not cover how well the media aspects were handled. Whilst this could be because media management was not an issue in some of these cases, we are concerned that some trusts appeared not to have given the subject due consideration.

There is still a need to improve major incident staff training

4.16 Acute trusts are required to ensure that staff are trained for their roles in a major incident. This involves ensuring they have the right skills and knowledge to undertake the roles expected of them and are familiar with systems and equipment. The Emergency Planning Co-ordination Unit has facilitated a new training initiative, **Figure 19**,

19 **An example of a major incident planning training tool**

Emergotrain UK is a new tool for major incident planning and major incident response management. It allows planning assumptions to be tested and outcomes to be measured; and also enables assessment of how different outcomes (for example lives saved and quality of treatment) could have been achieved if different decisions had been made. The Emergency Planning Co-ordination Unit funded its development in partnership with academia.

It is a real-time board-based model requiring a multi-disciplined approach to ensure tactical and strategic management of the incident and patient care. It covers the initial alert call through to the response at acute hospitals.

Early trials of Emergotrain, attended by the NHS, police, fire and local authorities, indicate that it provides a very realistic experience, testing planning assumptions and the organisation.

Norfolk and Norwich University Hospital NHS Trust concluded that it was an excellent exercise, which provided value for money and was an opportunity to train multidisciplinary groups within the organisation without any disruption to the daily workload.

Source: Norfolk and Norwich University Hospital NHS Trust; NAO research

but comments we received indicated that acute trusts had difficulty in financing training, and so take up may be limited.

Only very marginal improvements may have occurred since our survey in February 2002, following the national procurement contract to improve capability.

4.17 Only 60 per cent of 163 acute trusts which commented considered training to be sufficient, (pre-September 11), **Figure 20**. Staff in the South East region were well trained in comparison to other regions, while the Eastern Region was least well trained.

4.18 There were deficiencies in training:

- thirteen out of 77 Medical Incident Officers had not undergone any major incident planning training for at least five years;
- thirty per cent of acute trusts told us that some Mobile Medical Team members had not received any major incident specific training; and
- a third of new staff dealing with major incidents are not properly inducted.

4.19 The position had not generally improved following September 11. In February 2002 half of acute trusts said that key staff were not very well trained in the use of personal protective and other equipment; over 40 per cent said the same for decontamination procedures, and 14 per cent for training with communications systems.

There have been improvements in the provision of personal protective equipment and decontamination facilities, but they remain unsatisfactory

4.20 Major incident sites may be hazardous, and hospitals may be required to provide decontamination facilities and personal protective equipment for staff to deal with chemical contamination incidents resulting from industrial or transportation accidents or deliberate terrorist acts.

4.21 The results of our surveys before and after September 11 showed some improvements in decontamination facilities, but ongoing problems with personal protection equipment, with around half regarding such equipment for chemical, biological, radiological and nuclear incidents as poor or very poor, **Figure 21**. Our October 2002 survey indicated continuing improvements in the provision of personal protection equipment and decontamination facilities.

20 NHS Acute trusts' views on the extent of training of their relevant staff by region

	West Midlands	South West	North West	South East	Trent	North & Yorkshire	London	Eastern	Overall
Fully sufficient						5%		6%	1%
Sufficient	62%	65%	60%	73%	64%	60%	64%	41%	62%
Insufficient	37%	35%	40%	27%	36%	35%	36%	53%	37%

Source: NAO survey of acute trusts pre September 11 (August 2001)

21 Number of trusts who rated their personal protective equipment and decontamination facilities as poor or very poor

	Pre September 11	Post September 11
Personal Protective Equipment	<p>Four in ten for chemical incidents. Six in ten for biological incidents. Over half for radiological incidents. (equivalent information not available for nuclear incidents)</p>	<p>Three in ten for chemical incidents. Four in ten for biological incidents. Four in ten for radiological incidents. Six in ten for nuclear incidents.</p>
Decontamination Facilities	<p>Four in ten for chemical incidents. Half for biological incidents. Half for radiological incidents. (equivalent information not available for nuclear incidents)</p>	<p>Four in ten for chemical incidents. Four in ten for biological incidents. Four in ten for radiological incidents. Nearly six in ten for nuclear incidents.</p>

Source: NAO surveys of acute trusts pre and post September 11

4.22 Reasons given by trusts for not being prepared included a shortage of resources. In March 2002, the Department of Health provided £5 million for the NHS to improve personal protective equipment and decontamination capability. Of this, £2.2 million was specifically for acute trusts. Each Accident and Emergency Department received a one-off capital allocation. Trusts are responsible for maintenance and replacement costs thereafter. It remains to be seen whether this new funding is adequate, but in October 2002 one third of trusts told us that the capital allocation did not allow them to adequately meet their requirements for personal protection equipment and decontamination facilities.

There is scope for better liaison between acute trusts and other potential responders to major incidents

4.23 In most cases major incidents involve a co-ordinated and combined response with other organisations, most commonly the ambulance service, the fire service and the police. It is important, therefore, that acute trusts identify relevant organisations and establish and maintain effective liaison arrangements with them.

4.24 Before September 11, most acute trusts rated their liaison with the police, fire and ambulance service as good or very good. However liaison was considered to be less effective with the voluntary sector, (for example the St John Ambulance Brigade, which can play an important part in assisting at a major incident site), with neighbouring acute trusts with whom it may be necessary to collaborate and co-ordinate a response, and with local high potential incident impact organisations such as nuclear sites. A third had not copied their current plans to the local police service, 13 per cent had not

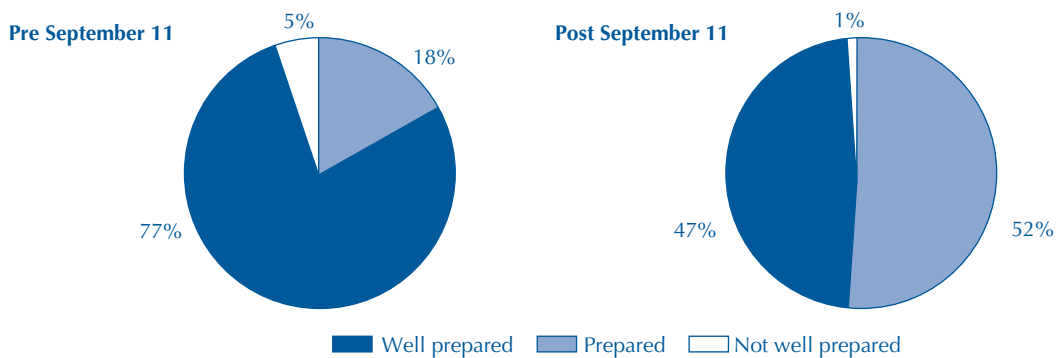
involved the police in their last multi-agency live exercise and a third had not involved the police in their last table-top exercise. After September 11, liaison had improved, but there were about 10 per cent of trusts that were unfamiliar with the emergency preparedness of other local emergency services.

Most acute trusts considered themselves prepared to tackle major incidents, but many are unprepared to handle mass casualties, and chemical, biological, radiological and nuclear incidents

4.25 Despite weaknesses in acute trusts' major incident planning procedures, almost all acute trusts told us that they considered themselves to be well prepared or prepared for general major incidents. Two-thirds rated themselves as better prepared now than before September 11, with a substantial increase in trusts considering themselves well prepared, from 18 per cent to 52 per cent, **Figure 22**. This had increased to 64 per cent by October 2002.

4.26 Between 1998 and 2001, acute trusts activated their major incident plans 89 times for external incidents, mainly in respect of road and rail accidents, chemical incidents, explosions, fires and floods, and 38 times for internal incidents, Annex E. Our review of debriefing reports gave the impression that acute trusts had coped well with the incidents in question, though there were naturally points for improvement. But this conclusion must be seen against our findings that debriefing reports were not necessarily objective or sufficiently focused on whether better outcomes could have been achieved, and we cannot therefore cannot give a clear cut assessment.

22 Acute trusts' preparedness for major incidents in general



Source: NAO self reporting surveys of health authorities pre and post Sept 11 (August 2001 and February 2002)

4.27 In the circumstances post September 11, acute trusts have themselves identified some major gaps in preparedness, specifically in relation to chemical, biological, radiological and nuclear threats. A significant number of acute trusts were not well prepared for specific types of major incidents, **Figure 23**. Reasons included lack of equipment, training and expertise. In most regions up to 65 per cent of acute trusts were not well prepared to tackle mass casualty, and chemical,

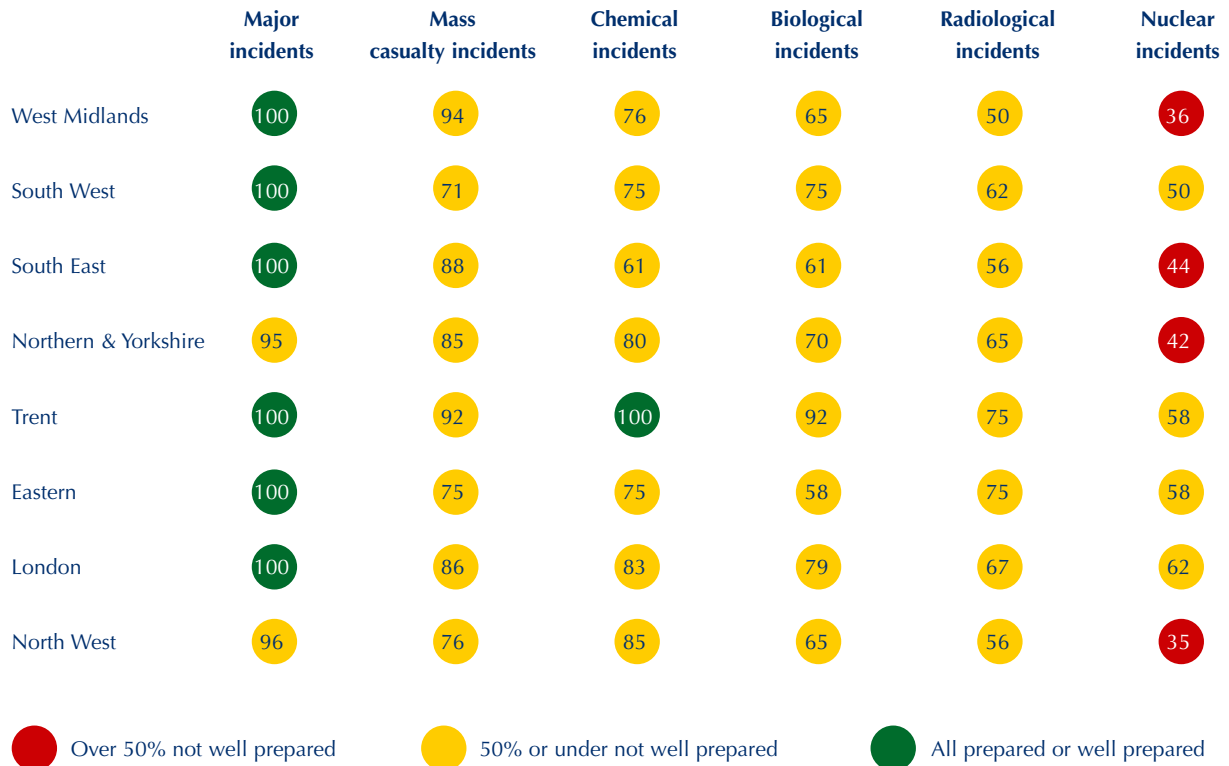
biological, radiological and nuclear incidents, **Figure 24**. In London, at least a third were not well prepared for all types of incidents (Annex G). The Department pointed out that some trusts might not have taken full account of cross-border co-operation in assessing themselves in this way. By October 2002, there had been some improvements, though 1 in 3 trusts were still not prepared for radioactive incidents, 1 in 4 for biological incidents and 1 in 5 for chemical incidents.

23 Acute trusts' assessment of their preparedness after September 11

Type of incident	Well prepared	Prepared	Not well prepared
General major incidents	52%	46%	1%
Mass casualty	19%	64%	16%
Chemical	10%	69%	21%
Biological	8%	62%	30%
Radiological	5%	57%	38%
Nuclear	4%	43%	53%

Source: NAO self-reporting survey of acute trusts post September 11 (February 2002)

24 Regional analysis of acute trust preparedness as at February 2002



NOTES

1. The numbers reflect the percentage of acute trusts 'prepared' or 'well prepared' in each region.
2. Because of limited coverage of the 'snapshot' survey in October 2002, the regional analysis is confined to the comprehensive results from our February 2002 survey.

Source: NAO survey of acute trusts post September 11 (February 2002)

Part 5

Preparedness of Ambulance Trusts

- 5.1 The 30 ambulance trusts are required to have major incident plans that take full account of the plans of other emergency services, the local authorities, local high potential incident impact sites, and neighbouring ambulance services. The plans should ensure that the service can mount an immediate response to a major incident with appropriately trained staff, ambulances and specialised equipment. All ambulance trusts replied to our two full surveys, and 80 per cent to our limited 'snapshot' survey in October 2002.
- 5.4 A sample of 20 major incident plans produced prior to September 11 by ambulance trusts was examined in detail against criteria agreed with the Department of Health. The average compliance score was 58 per cent. In addition to showing wide variation in the extent to which they were kept up to date, several plans lacked satisfactory elements on biological, radioactive and nuclear incidents. Coverage of relationships with other organisations was low given the importance of working with other emergency services and other parts of the NHS in the event of a major incident.

Major incident planning by ambulance trusts was generally good but more frequent review and further updating is needed

- 5.2 Pre September 11, almost all ambulance trusts reported that their plans took account of those of the police, fire service and neighbouring ambulance trusts and most were based on a formal assessment of hazards and risks. Virtually all trusts reported that, since September 11, they had either reviewed a previous risk assessment or carried out a new one, with around two-thirds of trusts reflecting the new or revised assessment in their major incident plans. All ambulance trusts copied their plans to the health authority, and significant numbers did so to the fire service, police, local authority, neighbouring ambulance trusts and acute trusts. All ambulance services involved the local police service in their last multi-agency live and table top exercises.
- 5.3 Plans should be reviewed at least annually. In fact, around two-thirds of plans were, but with a range from every six months to once every three years. Though plans may not become out of date, an interval of two or three years between reviews is too long to ensure best response in the event of an incident.
- 5.5 All ambulance trusts were expected to review and, if appropriate, revise their plans in the light of the post-September 11 Emergency Planning Co-ordination Unit guidance on mass casualties and chemical and biological incidents. About three-quarters had done so, with most making fundamental changes including establishment of evacuation plans, changes to the role and responsibilities of the ambulance service, and greater emphasis on regional co-ordination. Not all ambulance trusts however included key elements of the new guidance in their major incident plans:
- one-third did not include actions to be taken in the event of a mass casualty incident;
 - almost half did not address the availability, access and use of equipment;
 - only half addressed arrangements in the event of transport disruption; and
 - a fifth did not cover alternative arrangements in the event of a communications failure. Poor communications have been at the root of problems in past major incidents.

Plans had improved since September 11 but there is still scope for improvement

5.6 Our consultants reviewed in detail 15 ambulance trust major incident plans that we received, produced after September 11. There was a significant increase in the clarity and ease of use of the plans, but there were similar weaknesses to those of acute trusts.

5.7 For the majority of trusts:

- plans were still not based on a sufficiently comprehensive hazard and risk assessment;
- mutual aid arrangements were non-existent and at best consultation was only county-wide;
- the possibility of communications and transport disruption or failure was not considered;
- guidance issued by the Emergency Planning Co-ordination Unit was used as annexes to plans rather than being addressed within the plan itself.

In addition:

- some plans did not satisfactorily cover biological, radioactive and nuclear incidents; and
- six of the 15 plans showed virtually no coverage of relationships with external organisations.

All ambulance trusts tested their major incident plans in line with guidance but some feel more frequent testing would be useful

5.8 Ambulance trusts are required to test their communications systems at least monthly, and test all or part of their major incident plan at least annually. All ambulance trusts had tested their communication systems (half did so at least monthly), and tested their major incident plan annually. However, around one-third of ambulance trusts considered that they did not test their major incident plans frequently enough, and 10 per cent that their testing was not very effective.

The debriefing process leaves scope for improvement

5.9 Department of Health guidance requires ambulance trusts to undertake a thorough debrief after any major exercise or major incident, to analyse what worked well and what did not and, if appropriate, use the information to improve preparedness. Compliance with this requirement was variable. Only about around a third of ambulance trusts produced written debriefs after testing their communications systems, half did after

internal live exercises and about two thirds did so after table-top live exercises. Nearly 90 per cent did so after multi-agency live exercises.

5.10 However, as with acute trusts, the quality of debriefing reports was poor. They concentrated on the performance of the organisation in relation to the exercise or incident with insufficient overall consideration of whether the organisation's plan was effectively activated, or if it performed in a way that enabled the plan's objectives to be met. In addition, some 30 per cent of ambulance trusts told us that they were not satisfied with the feedback they got from other parties in debriefing, mainly because they received very little.

There is scope for staff training to be improved

5.11 Ambulance trusts are required to ensure that staff are trained for their roles in a major incident. Before September 11, no trusts considered that all relevant staff had been fully trained in dealing with major incidents, and over a third regarded it as insufficient. Post September 11, a third of ambulance trusts said staff were not very well trained in the use of personal protective and other equipment and in decontamination procedures. By October 2002, our 'snapshot' survey showed that a third of ambulance trusts still say that staff are not very well trained in the use of personal protective and other equipment, and that nearly 40 per cent are not very well trained in decontamination procedures.

There have been improvements since September 11 in communication systems, personal protective equipment and decontamination facilities, but there remain major shortcomings

5.12 In our August 2001 and February 2002 surveys the proportion of ambulance trusts which rated their communications systems as good or very good rose from 40 per cent to two-thirds. This was unchanged in our October 2002 survey.

5.13 Fewer ambulance trusts reported that their decontamination facilities were poor or very poor post September 11, but around half still felt this was the case. Our October 2002 survey showed further improvements, with around 40 per cent of ambulance trusts reporting their decontamination facilities for dealing with chemical and biological incidents as poor or very poor; but half saying their facilities for radioactive incidents are poor or very poor. This is mainly because of a lack of equipment and appropriate facilities. In March 2002, the

Department provided £2.8 million for ambulance trusts to purchase standardised equipment for dealing with chemical incidents.

Ambulance trusts recorded that they perform well at actual incidents but improvements are possible

5.14 Ambulance trusts reported to us that there were 40 activations of major incident plans in the three years to 2001, see Annex E.

5.15 We examined the 19 debriefing reports to assess performance. The majority concluded that performance at the scene had been good, though learning points were recorded. However, these conclusions need to be seen against the need to improve debriefing reports, in particular, for a more thorough analysis of whether improved outcomes could have been achieved.

5.16 Ambulance trusts told us, before September 11, that they considered themselves prepared or well prepared to deal with a major incident. Ambulance staff work dedicatedly at the scene of disasters alongside other emergency service personnel, often in hazardous conditions. We have no criticisms of them, but debriefing reports suggest that there may sometimes be room to improve significantly the overall organisation of the NHS ambulance response. Identification of points should not be seen as criticisms but as positive points for improvement. Lessons learned from a sample of debriefing reports that we examined included:

- The NHS response lacked effective leadership and co-ordination and there were communications problems within the lead ambulance service, between the lead ambulance service and the surrounding ambulance services, and between the ambulance service and local hospitals.
- There was confusion as to who was in control at the scene, duplication of effort, and lack of effective use of local receiving hospitals.

- There were too many Controls within the lead ambulance service and it was sometime before a Lead Control was established.
- It was not clear who the Ambulance Incident Officer was as responsibility was passed from one person to another, and many others identified themselves as AIOs. No single officer liaised and co-ordinated the efforts of neighbouring ambulance services, and reporting lines were unclear. Too many Forward Incident Officers were appointed. Consequently, distribution of patients was not well managed, with one hospital being overloaded whilst another, larger, hospital was underused.
- No Medical Incident Officer had been formally appointed on scene to direct the efforts of mobile medical teams and to assist with patient priority and destination.
- There were significant communications problems. The Ambulance Incident Officer was unable to contact any of the Controls and made key decisions without their input. Controls had problems contacting the scene. The dedicated telephone line was constantly blocked. Radio and mobile telephone batteries ran out very quickly at the scene. There were no handheld portable radios for the doctors on the scene.

Many ambulance trusts are as yet not well prepared to handle mass casualties, and chemical, biological, radiological and nuclear incidents

5.17 In the light of September 11 events, we asked ambulance trusts how prepared they were to deal with major incidents. By February 2002 three quarters considered themselves to be better prepared, and this rose to almost 80 per cent by October 2002. At February 2002, our survey returns indicated that a significant number of ambulance trusts were not well prepared to tackle chemical, biological, radiological and nuclear incidents (Figure 25). However, by the time of our survey in October 2002 the position had deteriorated.

25 Ambulance trusts not well prepared for chemical, biological, radiological and nuclear incidents

Type of incident	Ambulance trusts not well prepared
Chemical incident	23 per cent
Biological incident	30 per cent
Radiological incidents	37 per cent
Nuclear incidents	37 per cent

NOTE:

Results are based on responses from 30 ambulance trusts.

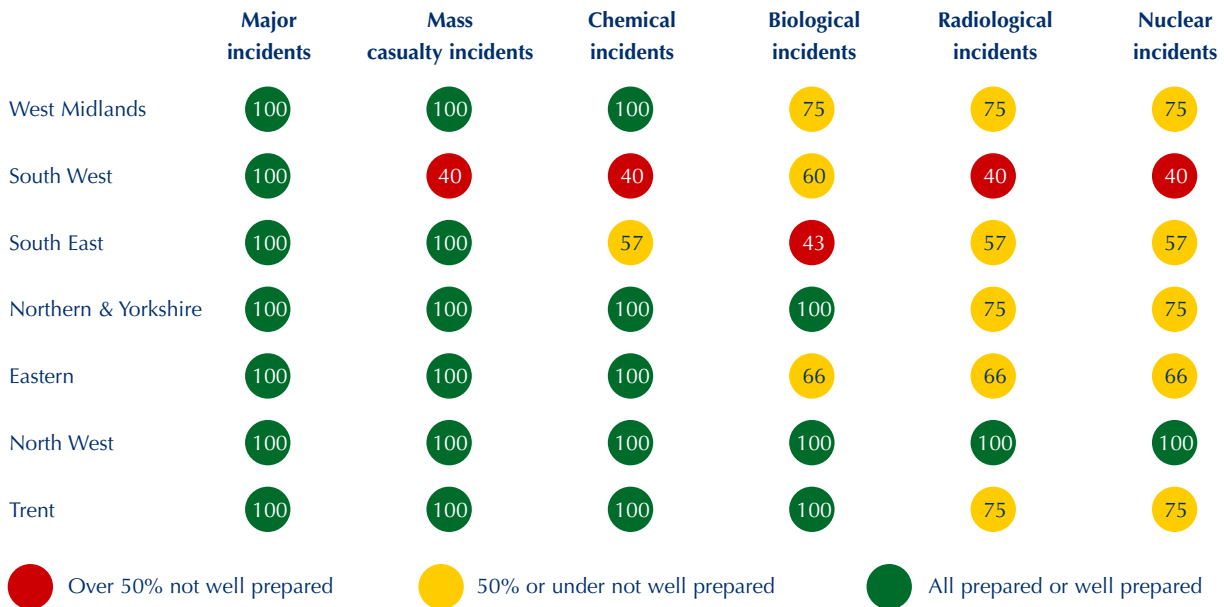
Source: NAO self-reporting survey of health authorities post September 11 (February 2002)

5.18 As **Figure 26** shows, no region was well prepared to tackle all types of major incident. However, North West, Trent and Northern & Yorkshire regions were better than most, with all ambulance trusts in them being prepared or well prepared to tackle most types of incident. Least well prepared, by a significant margin was South West Region. Reasons included lack of facilities, training and

equipment. The London Ambulance Service also believed it was not well prepared for radioactive (including radiological and nuclear) incidents, **Figure 27**.

5.19 We identified a range of good practice in ambulance trusts that could be adopted more widely to reduce regional and other variations, **Figure 28**.

26 Regional analysis of ambulance trust preparedness

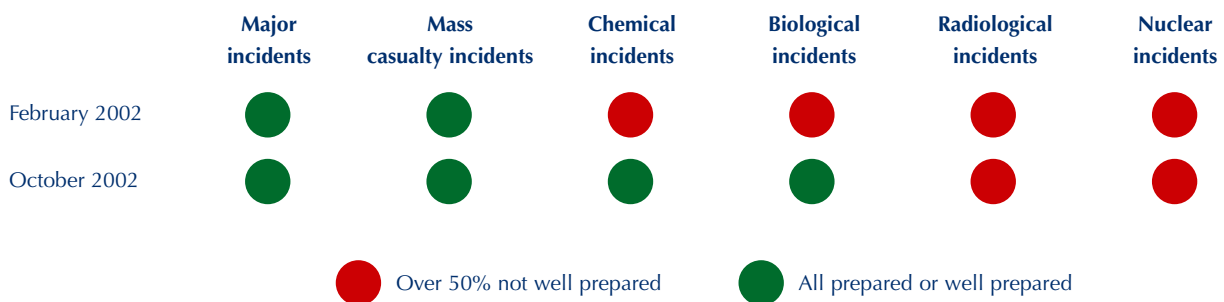


NOTES

1. The numbers reflect the percentage of ambulance trusts 'prepared' in each region.
2. Because of limited coverage of the 'snapshot' survey in October 2002, the regional analysis is confined to the comprehensive results from our February 2002 survey.

Source: NAO self-reporting survey of ambulance trusts post September 11 (February 2002)

27 Preparedness in London



London is unique, as it is the only region that has a single ambulance service, the London Ambulance Service, and will either score red or green. The October 2002 ratings above show that preparedness for biological and chemical incidents has increased since February 2002, but the service is still "not well prepared" for radioactive incidents (including radiological and nuclear incidents). Whilst the service rated itself "prepared" for mass casualty incidents, it commented that its own and NHS resources would be stretched in the event of large scale incidents, particularly chemical or biological. Further details of the London Ambulance Service's preparedness are in Annex G.

28 Good practice identified by ambulance trusts

- Subjecting each major incident to external review with subsequent debrief
- Major incidents should not be seen as a specialist job - but owned by everyone in the NHS
- Adopt an 'all hazards' approach to major incident planning
- Establish a network of contacts involved in major incident planning
- Ensure all preparation/planning is carried out within a multi-agency framework
- Principles of inter-agency approach should be applied to the planning/management of large public events
- Early notification of actual/potential problems to enable quick response
- Pre-arranged plans based around perceived risks
- Multi-agency co-operation is essential where cost prohibits single agency holding full exercise of plan alone
- Experienced officer shadowing less experienced staff on live exercises
- Format created for table-top exercise that brings all agencies into incident
- Uniformity across the region is important to ensure all agencies adopt same methods
- All equipment purchased centrally to ensure commonality
- One common and identified training centre

Annex A

Role of Key Players in Major Incident Planning

The Health Service (prior to October 2002)

Department of Health

- 1 The Emergency Planning Co-ordination Unit of the Department co-ordinates NHS major incident planning in England. Its role is to develop, issue and maintain national guidance; facilitate training in major incident preparedness; make sure lessons learned from incidents and exercises are applied; liaise with other government departments and provide national co-ordination, if needed, for a major incident.

NHS Executive Regional Offices (up to April 2002)

- 2 The Department of Health regional offices have overall responsibility for ensuring that local health services have major incident plans compatible with other major incident responders, and that accord with national guidance. The responsibility is usually delegated to the Regional Directors of Public Health. The day-to-day work is carried out by Regional Health Emergency Planning Advisors. They provide advice on all aspects of major incident planning, including hazard identification and risk assessment, preparation of plans, training, testing, and review and evaluation. They provide regional co-ordination if required, and contribute to national contingency arrangements.

Health authorities

- 3 Prior to April 2002, health authorities were responsible for ensuring they had their own major incident plans, for providing a strategic view on long-term threats, and assessing the impact on health and health services of every potential major incident. They were expected to lead on certain types of emergency, such as epidemics of infectious disease, and had a major advisory role in any deliberate release of toxic materials. Health authority Chief Executives also had responsibility for ensuring that trusts had adequate major incident plans, reviewed and exercised them, and collaborated with other agencies.

- 4 Health authority major incident planning functions were progressively transferred to Primary Care Trusts from April 2002. Our work began before this, when health authorities still had responsibility for major incidents. We were therefore able to examine their arrangements and identify lessons for primary care trusts in taking over the major incident planning functions.

Ambulance trusts

- 5 Ambulance trusts play a key role at the scene of major incidents assessing the incident, alerting, identifying and activating resources (especially from acute trusts), managing and co-ordinating NHS activity on site, and providing NHS communications. The Ambulance Service, in conjunction with the Medical Incident Officer and medical teams, seeks to save lives through effective emergency treatment at the scene, to determine the priority for release of trapped casualties in conjunction with the fire service, and to transport the injured in order of priority to receiving hospitals. Like acute trusts, they are each expected to have a major incident plan which is reviewed annually and tested regularly (including in conjunction with the police, fire service and others), and to participate in debriefing after major incidents or exercises. They should also train their staff in major incident procedures and use of equipment.

Acute trusts

- 6 The acute trust is at the heart of the NHS response to a major incident. It may be involved in despatching a Medical Incident Officer and mobile medical teams to the incident site, receiving casualties, liaising with the ambulance service and other trusts and agencies, maintaining communications with relatives and friends of those involved in the incident, and liaising with media and VIPs, whilst continuing to maintain normal essential functions. Acute trusts are required to have a major incident plan that considers, and is flexible enough to meet, all foreseeable causes of a major incident and to review and keep it up to date. They should exercise their plans regularly, and ensure that all relevant staff are trained for their roles in a major incident.

Other emergency responders

The Police Service

- 7 The police co-ordinate all the activities of those responding at and around the scene. They facilitate inquiries carried out by the responsible accident investigation body, such as the Health and Safety Executive, Railway Inspectorate or the Air or Marine Accident Investigation Branch. The police also process casualty information and have responsibility for identifying and arranging for the removal of the dead.

The Fire Service

- 8 The first concern of the fire service is to rescue people trapped in a fire, wreckage or debris. They extinguish fires and deal with released chemicals or other contaminants in order to render the incident site safe. They assist the ambulance service with casualty handling and the police with recovery of bodies. The fire service is responsible for the health and safety of personnel of all agencies working within the inner cordon, and will liaise with the police about who should be allowed access to ensure that they are properly equipped, adequately trained and briefed.

Local Authorities

- 9 In the immediate aftermath of a disaster the principal concerns of local authorities are to provide support for the emergency services, continue normal support and care for the local and wider community, use resources to mitigate the effects of the emergency and co-ordinate the response by organisations other than the emergency services. As time goes on, and the emphasis switches to recovery, the local authority will take a leading role to facilitate the rehabilitation of the community and restoration of the environment.

Voluntary sector

- 10 Disasters can overstress the resources of the emergency and local authority services and volunteers can contribute to a wide range of activities, either as members of a voluntary organisation or as individuals. Examples of the organisations involved are shown in Figure 29 overleaf.

Military

- 11 Military assistance can be sought to support the civil authorities. This has been an important part of many disaster responses in the past. Military resources can assist in incidents of adverse weather conditions or sudden and catastrophic events or incidents such as air or rail crashes.

The Environment Agency

- 12 The Environment Agency has primary responsibilities for the protection of water, land and air in England and Wales and will respond on a 24 hour/365-day basis to incidents of which it is notified that have caused or have the potential to cause harm to the natural environment, human health or the built environment. The Agency will establish effective working relationships at national and local level with other bodies dealing with incidents and emergencies including those responsible for emergency planning in central and local government and the emergency services.
- 13 The Agency will act to minimise the impact of incidents on human health, the environment and property, will provide specialist advice, issue warnings to those likely to be affected and investigate the causes taking enforcement action where appropriate.
- 14 In addition to meeting its Statutory Duties, Powers, responsibilities and commitments in relation to incident management, the Agency will also support external partners during environmental incidents and emergency planning issues. These will in particular cover the Agency's role in national plans for dealing with overseas nuclear incidents and maritime pollution incidents.

Central Government

- 15 The Cabinet Office has primary responsibility for civil emergency planning in England and Wales. It co-ordinates emergency planning activity at both central and local levels in co-operation with emergency services. When an incident requires a national response, central government has a role in providing advice or support to the local response and to keep Parliament informed of progress. At the central government level, there are two main elements in the arrangements for co-ordinating the response of central government to emergencies: The Lead Government Department and the Civil Contingencies Committee, chaired by the Home Secretary, to deal with national emergencies that cannot be handled by Lead Government Departments alone.

16 Lead Government Departments are expected to be prepared to:

- Co-ordinate the activities of central government departments in the response to a disaster, providing a framework within which individual departments can discharge their specific responsibilities. An important part of this work will be to ensure that the necessary links are established with the local response; and

- Co-ordinate the collection of information on the disaster and its effects for the purposes of briefing ministers, informing Parliament, providing information to the public and the media at national level, and act as the focal point for communications between the local Strategic Co-ordinating Group(s) and central government.

17 Below is an example of the organisations involved in the Hillsborough football ground incident, **Figure 29**.

29 Hillsborough Disaster 1989

Care of the injured

- St John Ambulance Brigade
- South Yorkshire Metropolitan Ambulance Service
- Sheffield Wednesday's doctor
- Doctors and nurses in the crowd
- Police
- Northern General/Hallamshire/King Edward VII Hospitals

Care of the uninjured, friends and relatives

- Police
- Hospital staff
- Social work staff from Sheffield City Council
- Volunteers including:
 - Salvation Army
 - League of Friends
 - Individuals manning telephone lines

Dealing with the dead

- Police
- HM Coroner
- Pathologists from the University and NHS
- Hospital staff

Providing social and psychological support

- Social Services staff
- Sheffield Occupational Health

Meeting religious and cultural needs

- Religious and cultural leaders

Source: Planning for Major Incidents: the NHS Guidance, NHS Executive 1998

Annex B

NHS Emergency planning and response to major incidents: Summary of roles and responsibilities from October 2002

Background

- 1 Shifting the Balance of Power: The Next Steps (Department of Health, February 2002) states that Primary Care Trusts will become responsible for the delivery of the vast majority of current Health Authority functions. Emergency planning which includes the preparation of major incident plans is one of these functions and this is in keeping with the three main roles of Primary Care Trusts which are to:
 - Improve the health of the community
 - Secure provision of high quality services
 - Integrate health and social care locally.
- 2 The Department wrote to Chief Executives of Primary Care Trusts and Health Authorities on 9 April 2002. The letter referred to the PCT Functions (Amendment) Regulations 2002 and expressed the need for Health Authorities to delegate the emergency planning function to Primary Care Trusts as soon as is practicable during the period up to October 2002.
- 3 The main roles and responsibilities are summarised below and in **Figure 30**.

NHS Trusts

- 4 The role of NHS trusts remains unchanged. The first response to major incidents is normally by Ambulance Services NHS Trusts and Acute Trusts who have expertise and training to handle casualties in the immediate aftermath. These mechanisms have operated well for many years with Police, Fire, Local Authority, the voluntary sector and a range of partner agencies involved in local planning groups. **Chief Executives** should ensure that their trusts have appropriate up-to-date major incident plans that have been tested in accordance with DH guidance, the co-ordination of the operational response being managed through the usual control mechanisms involving Ambulance Control.

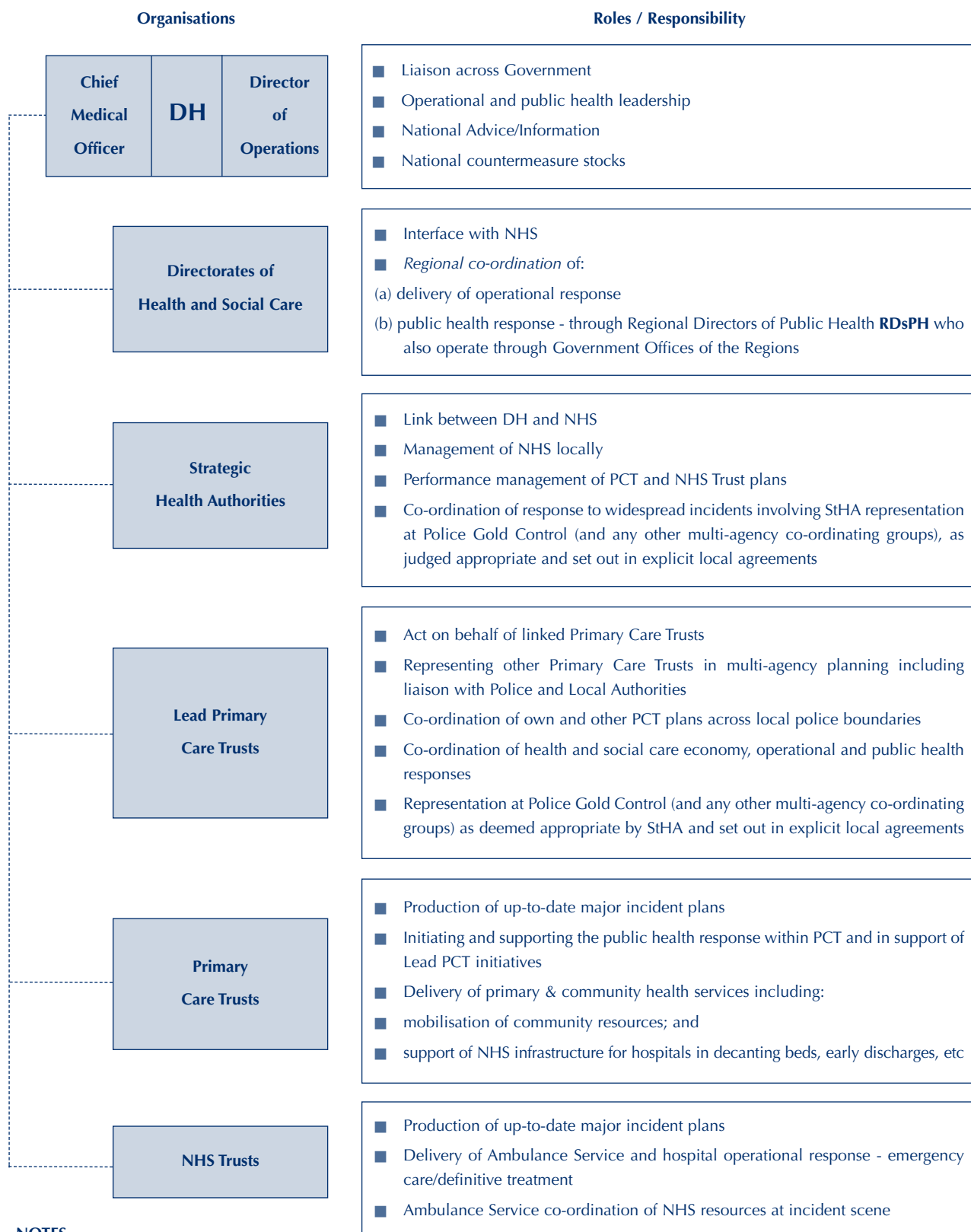
Primary Care Trusts

- 5 **Chief Executives** should ensure that their PCT has appropriate major incident plans and that there are appropriate arrangements to initiate and support the public health response, using the resources of the public health network including the expertise of Consultants in Communicable Disease Control (CCDCs) and others, and liaison with Regional Director of Public Health (RDsPH).
- 6 The Chief Executive should ensure that there are mechanisms to mobilise primary care and community resources at any time in response to a major incident. This may mean taking steps to relieve pressure on receiving hospitals e.g. they may need to discharge patients to the community.
- 7 Primary Care Trusts may need to deal with an influx of patients e.g. those who have minor injuries or who are affected by an environmental exposure such as a toxic plume. Primary Care Trusts may also need to administer preventive measures such as vaccines or drugs to protect the health of their populations in the event of accidental or deliberate release of hazardous materials or communicable disease outbreak.
- 8 Chief Executives should ensure that appropriate staff in the PCT understand the explicit local agreement involving 'linked Primary Care Trusts' and the Strategic Health Authority that gives details of how representation at Police Gold and (any other relevant strategic co-ordinating groups) will function.

Lead Primary Care Trusts for Emergency Planning and Response

- 9 **Chief Executives** should ensure that there is a lead officer for ensuring that the major incident plans of the linked Primary Care Trusts 'fit' with each other and with those of emergency planning partners such as the Police, Fire and Local Authorities, and surrounding Primary Care Trusts who share a boundary but have a different 'lead' PCT.

30 Emergency Planning and response to major incidents: roles and responsibilities from October 2002



NOTES

1. Public Health Network -----
2. In London Primary Care Trusts are co-terminous with London Boroughs, each of which has its own emergency planning group which the local PCT will attend. Representation at Police 'Gold Controls' is undertaken by DHSC.
3. The proposed Health Protection Agency will provide advice and support at local, regional and national levels on chemical, biological and radiological and nuclear incidents.

Source: Department of Health

- 10 Chief Executives must ensure that they have established clear protocols, with nominated post-holders to lead co-ordination of the health and social care economy operational and public health response and representation at Police 'Gold Controls' and any other strategic co-ordinating group that is part of the local response. These should be based on explicit local agreements in conjunction with the Strategic Health Authority. The protocols should be shared with and understood by all the Primary Care Trusts on whose behalf they are in the lead. Chief Executives should appropriately ensure that there is an on-call rota 24 hours per day, 7 days a week to provide this service.
- 11 The **Regional Director of Public Health (RDPH)** should ensure that there are appropriate arrangements with the Lead PCT Chief Executive, to co-ordinate the public health response to a major incident that involves more than one of the 'linked' Primary Care Trusts.

Strategic Health Authorities

- 12 **Chief Executives** should ensure that in association with RDsPH and RHEPAs those Trusts and Primary Care Trusts within their areas have appropriate major incident plans and response arrangements that are regularly tested in accordance with national guidance. Chief Executives should ensure that the Strategic Health Authority as headquarters of the local NHS, has appropriate arrangements to be able to co-ordinate the response to a widespread incident, or one that significantly threatens NHS capacity in their areas and that these arrangements are set out in explicit local agreements.
- 13 Chief Executives should ensure that within their areas that there are satisfactory arrangements for representation at Police strategic 'Gold Controls' and that these arrangements have been discussed and agreed with RDsPH who will involve RHEPAs. This will also mean ensuring appropriate arrangements with Chief Executives of adjacent Strategic Health Authorities where Police Authorities are not coterminous. It is recognised that arrangements for representation at the Police strategic 'Gold Controls' for London, is through the Regional Director of Health and Social Care.
- 14 Chief Executives should ensure that there are clear arrangements with all Primary Care Trusts for upward reporting of major incidents, including out-of-hours and for media handling.

Department of Health - Directorates of Health and Social Care

- 15 **Directors of Health and Social Care (DsHSC)** are the first point of contact within DH for Chief Executives of Strategic Health Authorities (or their nominees) on operational matters. Arrangements will need to be in place to enable DsHSC to be briefed and to establish regional co-ordination of the operational response as the incident dictates.
- 16 **Regional Directors of Public Health (RDsPH)** lead the Public Health response involving the public health network.
- 17 The Director of Operations acts as a focal point within HQ for the DHSC in support of the Chief Executive of the NHS and works in conjunction with the Chief Medical Officer. This arrangement provides for operational and public health leadership in England according to the nature of the incident. The Department provides upward reporting, cross-government briefing and representation as necessary. It provides national advice and information and liaises with the devolved administrations, other nations and international bodies as appropriate. It also is responsible for obtaining and making available pharmaceutical and vaccine countermeasure stocks.

Department of Health - Chief Medical Officer (CMO) and Regional Directors of Public Health

- 18 Working closely with the DH Director of Operations **CMO** will provide national public health leadership in conjunction with **RDsPH** and the internal DH response to the incident, including briefing, cross-government and international activity as required.
- 19 **RDsPH** play a very important role as leaders of the public health networks that should connect with all parts of the NHS. RDsPH have responsibility for health emergency planning within their areas. They are linked to non-NHS agencies at regional level.

Department of Health - Health Protection Agency (HPA)

- 20 The Government proposes to create an agency to provide specialist advice and support for health protection and health emergency planning.

Annex C

Summary of the main items related to terrorism issued by the Department of Health/Public Health Laboratory Service

	Issued to		
March 2000	Trusts, DPHs, RDPHs	Deliberate Release Guidance of Bio/Chem Agents	
11 September 2001	Epinet to DPHs	To check plans are in place	
17 September 2001	DCMO letter to DPHs, CCDCs	Mass casualty incident guidance	
8 October 2001	RDPHs, CCDCs	Release of Radioactivity in the Environment (updated 4 Dec 01)	
15 October 2001	DCMO letter to RDPHs, CCDCs	Chemical or biological release	
17 October 2001	Issued on PHLS Website GPs advised via Epinet (19/10)	Botulism	
1 November 2001	Issued on PHLS Website	Anthrax - various	
9 November 2001	DCMO letter to RDPHs/CEs	PPE/decontamination	
26/29 November 2001	Issued on PHLS Website	Tularaemia	
14 December 2001	Issued on PHLS Website	Chlorine	
20 December 2001	DCMO letter to CEs Trusts/ RDPHs etc	Reserve National stocks	
14 March 2002	DCMO letter to RDPHs/CEs	Contracts re PPE	
27 March 2002	DCMO letter to RDPHs/CEs	Nerve Agent Antidote Service	
9 April 2002	EPCU letter to RDPHs/CEs	Primary Care Trusts Emergency Planning functions	
21 August 2002	From EPCU to RDPHs for forwarding onto Primary Care Trusts	Public health response to a deliberate release - various	
9 September 2002	Issued on DH Website	Deliberate Release Guidance of Bio/Chem Agents (Edited version of March 2000 issue)	
25 September 2002	Issued on DH Website	Planning for Major Incidents 'The NHS Guidance' New chapter on Primary Care Trusts	

Subjects

	Overt deliberate release	Covert deliberate release	Botulism	Plague				
	Nerve Agents	Plague - General	Mustard Gas	Smallpox	Unusual illnesses			
	Reserve stocks							
	Deliberate release of plague							
	Hydrogen Cyanide	Phosgene						
	Anthrax - various	Botulism - various						
	Public Health response	Biological / chemical Aide memoire	Anthrax	Botulism	Smallpox	Tularaemia	Chemical	Nuclear
	Emergency Planning & Response to Major Incidents: Roles & Responsibilities							

Annex D

Major incident planning in the USA and Sweden

USA

- 1 Following the terrorism on September 11 the US acted swiftly to implement a number of measures to tighten security and ensure better preparedness for any further attacks. As part of this programme, over \$1 billion was given to US states to develop comprehensive bioterrorism plans, upgrade infectious disease surveillance, enhance hospital capacity to deal with mass casualties and improve liaison between hospitals. At the state level, initiatives such as the Greater New York Health Association's Emergency Preparedness Co-ordinating Council, whose aim is to encourage collaborative regional planning and disaster response initiatives, have been put in place.
- 2 Some 75 per cent of US hospitals are privately run, and whilst many are part of associations that adopt similar practices, there is no requirement for them to follow any national guidelines on emergency preparedness. Nonetheless there are published guidelines in place that many hospitals follow that ensure some degree of consistency. For example, the Joint Commission on Accreditation of Healthcare Organisations (JCAHO) published, in January 2001, a set of emergency management standards requiring hospitals to develop, implement and test major incident plans. JCAHO requires hospitals that wish to be accredited to meet these standards including, for example, undertaking a minimum of two live tests a year. There is no requirement, however, for multi-agency testing.
- 3 Though there is no formal mechanism in the US to disseminate good practice and lessons learned to healthcare organisations, JCAHO does this to some extent through its monthly newsletter. New efforts are underway to disseminate the results of experience and to inform hospitals of best practices. The Hospital Preparedness Program is establishing a National Resource Centre to help do that, and the government Health Research Agency also has a programme underway to make available the latest information on best practices and new models of emergency preparedness.

- 4 Our survey of five US hospitals in April 2002 showed that all had a major incident plan which was reviewed annually and based on an assessment of hazards and risks. Communication systems are tested once or twice a year and they participate in 1-3 multi-agency live tests each year. Debriefing reports are produced after major exercises and major incidents but there is little external circulation. Most hospitals rated their communications systems, personal protection equipment and decontamination facilities as good or very good, with only one of the hospitals rating their communication systems as poor, and similarly rated their decontamination facilities. Liaison was considered to be good with all third parties. Of the four hospitals supplying the information, all except one were better prepared than before September 11 to deal with a major incident.

31 Case Study – US National Disaster Medical System - a system for dealing with mass casualties

When a catastrophe occurs, any one hospital, area or even US state may lack the capacity to deal with the number of casualties. For example, whilst California has around 70,000 hospital beds, an earthquake along the San Andreas fault could involve 100,000 casualties.

The National Disaster Medical System (NDMS), a partnership of federal departments, state and local governments and the private sector aims to:

- Provide supplemental health and medical assistance in domestic disasters;
- Evacuate patients who cannot be cared for locally to designated locations elsewhere in the US;
- Provide hospitalisation in a nationwide network of hospitals to care for the victims of domestic disasters or military contingencies that exceeds local capacity.

Within NDMS are over 8,000 registered health professional and support volunteers, and 100,000 beds in 2,000 hospitals nation-wide. The various NDMS teams include 55 Disaster Medical Assistance Teams, many of which can field teams of 35 health professionals and support staff of various disciplines, and speciality teams including: burn (5); paediatric (2); crush medicine (1); international medical/surgical (1); mental health (3); veterinary medicine (4); mortuary (11); and management support (1). Recent deployments include the World Trade Centre attacks and the 2002 Winter Olympics in Salt Lake City. Since 2000, NDMS has deployed 24 times.

Source: National Disaster Medical System, USA

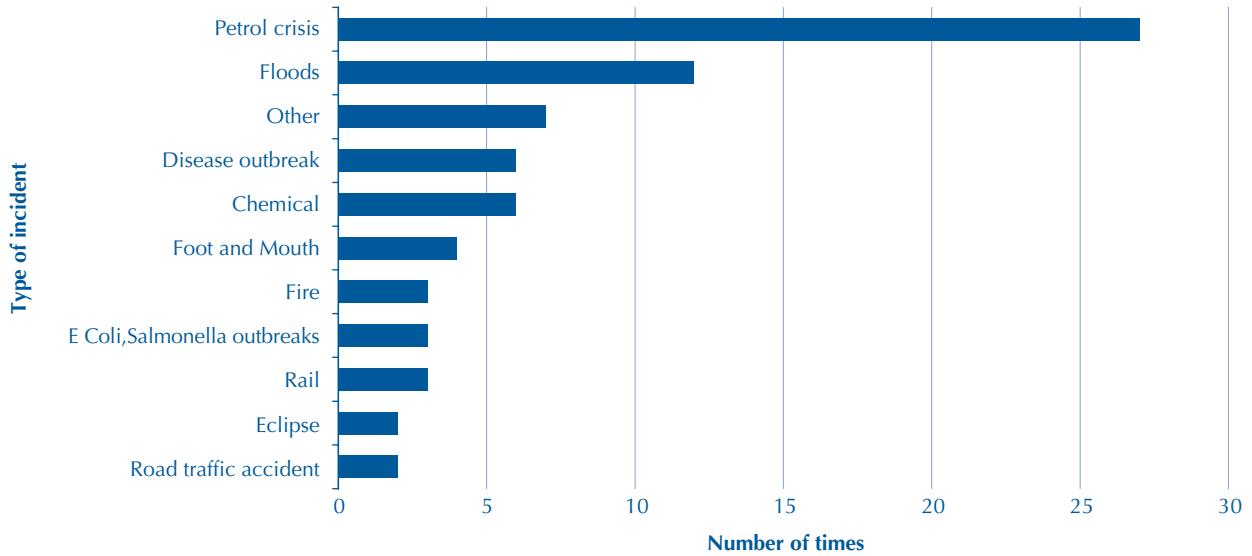
Sweden

- 5 Sweden adopts a 'total defense' (sic) strategy, placing a high value on preparing for major incidents. An Agency of Civil Planning co-ordinates this strategy and provides funding to the relevant government departments to this end. Within the National Board of Health and Welfare, the Unit of Emergency and Disaster Planning takes responsibility for issuing guidance to the 20 County Councils, and ensuring guidance is followed. It also provides funding for training, equipment and information technology.
- 6 Key success factors in central major incident planning in Sweden include:
 - The Unit is very proactive in the planning process and adopts a hands-on approach to it in each County Council. The Unit is developing SWEDE, a medical and emergency services information system for emergency care, to co-ordinate the despatch of medical support vehicles and allocation of casualties to health care facilities. SWEDE can provide information on the nature of the major incident, the number of casualties, their symptoms and expected arrival times at healthcare facilities, the local emergency resources available, and the capacity of local health care services;
 - guidance issued by the Unit draws on lessons learned from national and international major incidents, using reports published by KAMEDO, an organisation affiliated to the Unit, which studies and reports on major incidents around the world;
 - although the guidance is implemented on a voluntary basis, a Supervision Department within the National Board of Health and Welfare ensures it is followed at the local level;
 - the Unit's annual budget is ring-fenced for the provision of training, equipment technology guidelines and research, due to the high priority placed on preparedness by the Swedish Government.
- 7 As regards local major incident planning, Joint Central Committees in each county are responsible for overseeing planning in their county. Each Committee is supported centrally by the Unit of Emergency and Disaster Planning in the National Board of Health and Welfare, which provides funding if needed. The County Council must ensure that all health care and emergency services within the county are adequately prepared for major incidents.
- 8 Disaster Committees within hospitals and primary care ensure effective planning is carried out locally. Hospital staff, representatives from local primary care organisations, emergency services and others sit on these Committees which are responsible for ensuring that major incident plans are prepared and kept up-to-date, all personnel involved in planning receive adequate information and training, and equipment and supplies are available and maintenance arrangements in place.

Annex E

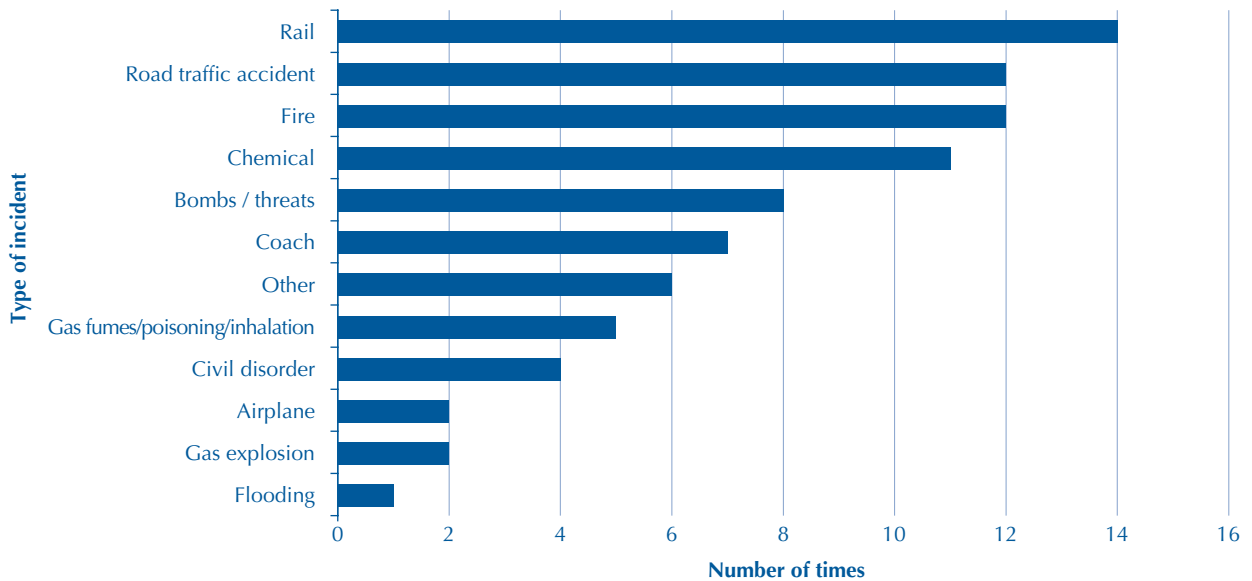
External Incident Plan activations by Health Authorities, Acute Trusts and Ambulance Trusts, 1998-2001

32 Health Authorities: Activation of plans for external incidents during 1998-2001



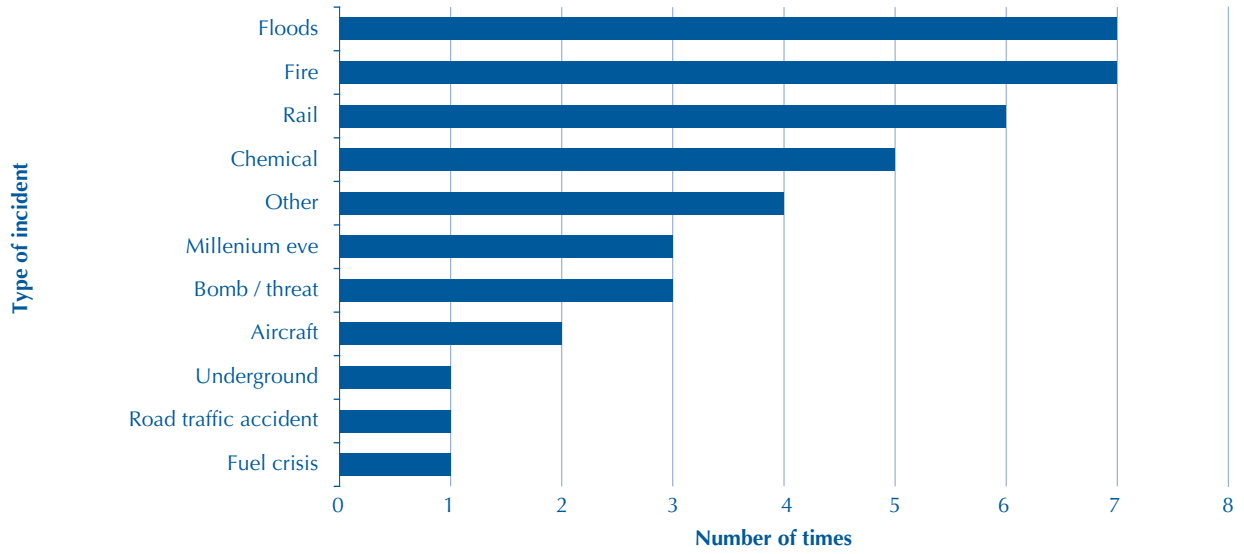
Source: NAO self completion survey pre September 11 (August 2001)

33 Acute Trusts: Activation of plans for external incidents during 1998-2001



Source: NAO self completion survey pre September 11 (August 2001)

34 Ambulance Trusts: Activation of plans for external incidents 1998-2001



Source: NAO self completion survey pre September 11 (August 2001)

Annex F

Assessment criteria for review of major incident plans

- 1 Major incident plans were submitted to the National Audit Office by Health Authorities, Acute and Ambulance trusts. Independent consultants reviewed these plans against criteria agreed by the National Audit Office and the Department of Health's Emergency Planning Co-ordination Unit.
- 2 The plans were reviewed against the criteria to establish whether they contained the necessary elements for a major incident plan as set out in the Department's guidance, **Figure 35**.
- 3 The consultants considered each plan individually and awarded a score against the agreed scoring system contained within the criteria. Each plan was measured against a number of key areas. Each key area was further broken down into separate elements that carried a weighted score to reflect its relative importance, the total providing a score for the key area. The total score for the key areas of each plan was then expressed as a percentage of the total possible score. Full compliance with the guidance would result in a score of 100 per cent.
- 4 To ensure consistency and to reduce subjectivity to the minimum the plans were divided randomly between the two consultants. This enabled a comparison between the scores awarded by each consultant to the various health authority and trust plans. In addition, each consultant reviewed the scoring of a number of plans evaluated by the other, this ensured a consistent approach to the process. Individual authority and trust plans were also ranked in overall score order indicating the spread and level of major incident preparedness across England.

35 Assessment criteria for the review of major incident plans

Criteria	Check list
<p>The plan is up to date</p>	<p>(a) Plan is part of a continuous process</p> <ul style="list-style-type: none"> ■ Evidence of amendment sheets, a statement as to when the plan was last updated and by whom ◆ Evidence that the plan has been reviewed and updated if necessary since September 11 ■ Evidence of version control and of a style conducive to a continuous process ■ Evidence of a statement to say plan is under constant review ■ Evidence of endorsement by Chief Executive <p>(b) Plan incorporates up to date national guidance</p> <ul style="list-style-type: none"> ■ Evidence of references to relevant guidance/legislation ◆ Evidence of references to national guidance/briefing post September 11: mass casualty; chemical incidents response; public health response to deliberate release of biological and chemical agents <p>Maximum score, trusts and health authorities</p> <p>Pre September 11 = 6</p> <p>Post September 11 = 8</p>

35 Assessment criteria for the review of major incident plans contd.

Criteria	Check list
<p>The plan incorporates all elements of the trust's response as outlined in national guidance.</p>	<ul style="list-style-type: none"> ■ Clear alerting and activating procedures ■ Clear statements of the roles and responsibilities of key staff/functions, including Chief Executive ■ Clear arrangements for establishing a hospital control team, arrangements for casualty entrance into hospital, and Police Casualty Documentation and hospital documentation teams (acute trusts) ■ Clear arrangements for establishing an incident management team (ambulance trusts) ■ Clear arrangements for the maintenance of documentation and logs (ambulance trusts) ■ Clear arrangements for establishment of functional management at incident location (ambulance trusts only) ■ Clear arrangements for co-ordinating NHS communications at the scene (ambulance trusts only) ■ Identification of receiving wards (acute trusts) ■ Arrangements for creating additional capacity/space (acute trusts) ■ Clear arrangements for obtaining medical mobile teams and medical incident officer (ambulance trusts) ■ Clear arrangements for special needs of children, hospital clinical teams, mobile medical teams and medical incident officer ■ Clear procedures for initial triage (acute and ambulance trusts) ■ Arrangements for the health and safety of all NHS personnel deployed on site (ambulance trusts) ◆ Clear evidence of command and control arrangements within the health economy (ambulance trusts and health authorities) ■ Action cards/lists for key staff/functions ◆ Evidence that action cards have been reviewed and updated as necessary since September 11 ■ Clear instructions regarding the preservation of forensic evidence ■ Coverage of hospital pressure points (acute trusts) ■ Clear arrangements for relatives and other carers, VIP's and the media ■ Arrangements for debriefing and subsequent psychological support for patients, relatives and staff. ■ Clear identification of resources required for the response ◆ Clear arrangements in the event of communications failure and transport disruption ■ Clear provision for the strategic management of an incident, which involves a range of health service providers e.g. arrangements for JHAC (health authority) ■ Clear provision for the health service input to the strategic management of major incident involving a range of other agencies (health authority) ■ Clear mechanism for activation of the Plan where the Health Authority is likely to manage the incidents directly (health authority) ■ Clear arrangements for epidemiological follow-up (health authority) <p>Maximum Score, Acute Trusts: Pre September 11 = 24 Post September 11 = 27</p> <p>Maximum Score, Ambulance Trusts: Pre September 11 = 19 Post September 11 = 23</p> <p>Maximum Score, Health Authorities: Pre September 11 = 16 Post September 11 = 17</p>

35 Assessment criteria for the review of major incident plans contd.

Criteria	Check list
<p>The plan is flexible enough to meet all possible causes of a major incident</p>	<ul style="list-style-type: none"> ■ Plan defines and covers both external and internal incidents and identified risks/hazards. Where the Plan does not cover internal incidents there are references to separate contingency plans ◆ Evidence that risks and hazards have been reviewed since September 11 ■ Plan covers chemical, biological, radioactive and nuclear incidents ◆ Evidence of arrangements to deal with deliberate release of chemical and biological agents being updated to take account of guidance post September 11. ◆ Evidence of arrangements to deal with mass casualties as required by guidance post September 11. <p>Maximum Score, Trusts: Pre September 11 = 4 Post September 11 = 7</p> <p>Maximum Score, Health Authorities: Pre September 11 = 4 Post September 11 = 6</p>
<p>The plan is clear, unambiguous and easy to use</p>	<ul style="list-style-type: none"> ■ Easy to read language and format ■ Plan has comprehensive index, cross-referenced as appropriate ■ Action cards/lists are simple, prioritised and accessible ■ Does not require users to unnecessarily access other documents and references or refer them to annexes ■ Plan is brief and concise containing key information only <p>Maximum Score, Trusts and Health Authorities: Pre September 11 = 5 Post September 11 = 5</p>
<p>Plan states relationship to external organisations (including NHS), their respective roles and how the organisations will interface with each other</p>	<ul style="list-style-type: none"> ■ A statement of other key organisations and their roles ■ An indication of the liaison required and procedures ◆ Evidence of increased liaison and improved mutual aid arrangements since September 11 (ambulance trusts and health authorities) <p>Maximum Score, Acute Trusts: Pre September 11 = 2 Post September 11 = 2</p> <p>Maximum Score, Ambulance Trusts: Pre September 11 = 2 Post September 11 = 4</p> <p>Maximum Score, Health Authorities: Pre September 11 = 2 Post September 11 = 3</p>

NOTE

- ◆ Added post-September 11

Further information can be obtained from the NAO

Annex G

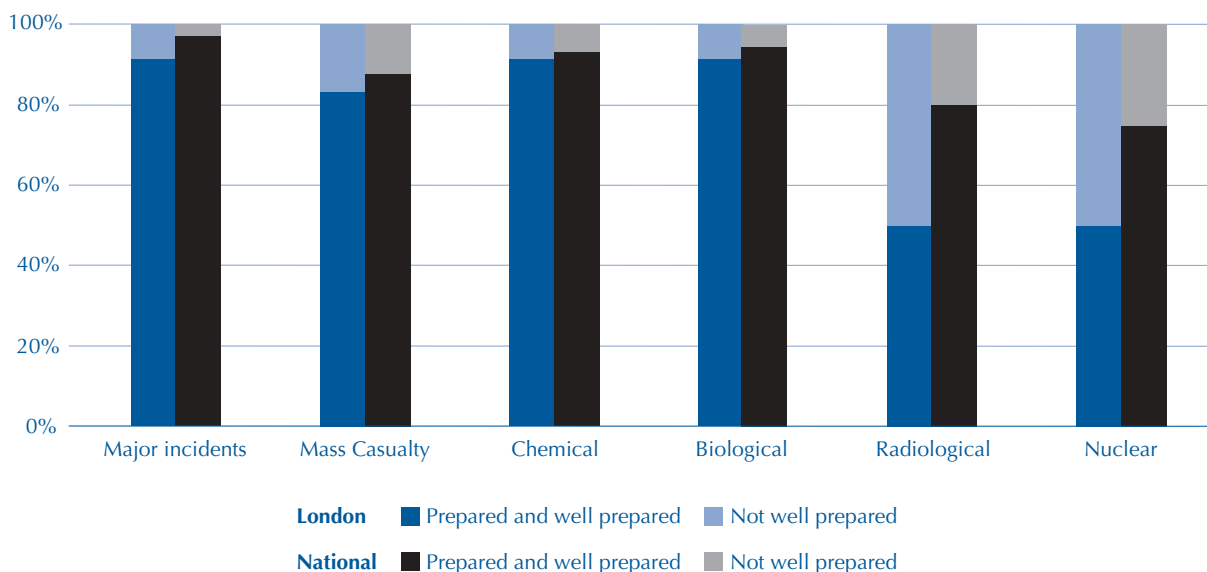
Preparedness in London

Health Authorities

1 Twelve out of 14 London health authorities responded to both the initial (August 2001) and follow-up surveys (February 2002). Since our surveys the Department has launched some initiatives which may have resulted in improvements. The key results from our surveys were:

- Most reported that their preparedness had improved since September 11, and that they were now prepared or well-prepared for general major incidents, and mass casualty, chemical and biological incidents. However, half were not well prepared for radiological or nuclear incidents.
- All had assessed risk and hazards since September 11, compared to only 2 previously, and most had reflected new and higher risks in their plans. But many plans did not cover key elements of the post-September 11 guidance, such as, arrangements to follow in a mass casualty incident (25%) or back-up communications arrangements (25%). Many had not agreed mass casualty plans with neighbouring health authorities and the emergency services.
- Plans had not been tested regularly before September 11 though in May 2001 all London Health Authorities held a communications exercise and most had conducted table-top exercises by September 11. Between September 2001 and March 2002, only 2 had validated their mass casualty plan, a few more their chemical and biological incident plans, but none had tested nuclear or radiological incident plans.
- Only half had reviewed trust plans before and after September 11 and many did not monitor testing of plans by acute trusts.

36 Preparedness of London Health Authorities: A comparison with national averages



NOTE

The proportion not well prepared in London (50%) for radiological or nuclear incidents was much higher than the national averages of 20% and 25%, respectively.

Source: NAO self completion survey post September 11 (February 2002)

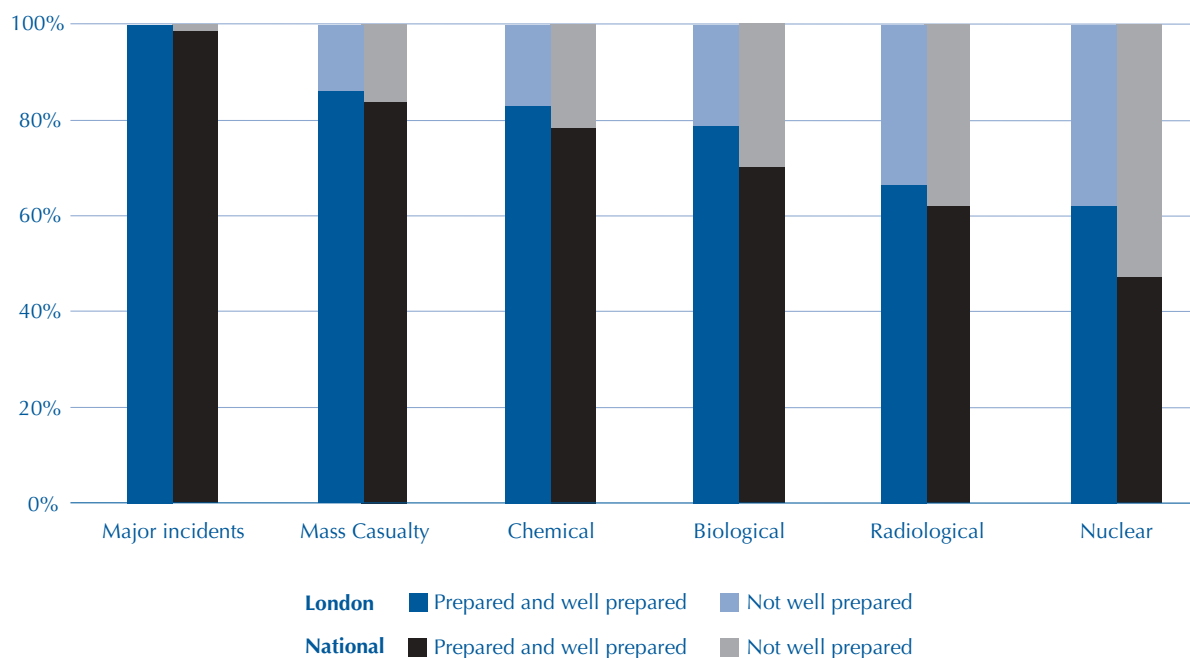
Acute trusts

2 All 28 London acute trusts responded to the pre-September 11 survey, 24 to the follow-up survey (86%) in February 2002 and 20 (74%) to the October 2002 survey. The key results were:

- Preparedness had improved following September 11 and most trusts now rated themselves well-prepared or prepared, **Figure 37**. In February 2002, one in six were not well prepared for chemical incidents, one in five for biological incidents and more than one in three were not prepared for radiological and nuclear incidents. By October 2002, the position had improved with only a few trusts not well prepared for chemical (one) and biological (three) incidents. However, more than one in three were still not well prepared for incidents involving radioactivity. This may, in part, be because the Department of Health's PPE and decontamination facilities procurement contract did not come into operation until after our February 2002 survey.

- The number of trusts not basing their plans on formal assessments of risk fell from 14 (52 per cent) to two (8 per cent) between the August 2001 and February 2002 surveys. Mass casualty, biological and chemical incidents were now potentially higher risks, and whilst most had revised their major incident plans to reflect these, many had not included key elements of new guidance, such as procedures in the event of a mass casualty incident (a fifth), and alternative arrangements in the event of transport disruption (a half - though this may have been covered within the organisation's business continuity plan). Most had considered capacity creation issues.
- Few had tested their plans regularly before September 11, and few had tested their plans since then for mass casualty, chemical, biological, radiological and nuclear incidents. For example, only two trusts had tested their biological incident plan by October 2002. A third said staff received insufficient training and in 5 trusts Medical Mobile Teams had received no training at all. Post-September 11, a third reported that staff were not very well trained in personal protective equipment and decontamination procedures.

37 Preparedness of Acute Trusts: A comparison with national averages



NOTE

The proportions rating themselves well prepared and prepared are higher than the national averages.

Source: NAO self-completion survey post September 11 (February 2002)

- The numbers rating personal protective equipment as poor or very poor reduced from 12 to two between the August 2001 and February 2002 surveys and from 14 to 2 for biological incidents, and from four fifths to around a third for radiological incidents. By October 2002 none of the trusts responding to the survey rated themselves poor or very poor for chemical and biological incidents, but nearly a third still gave this rating for incidents involving radioactivity.
- The numbers rating decontamination facilities as poor or very poor also fell. However, in February 2002 a third rated facilities and capacity as poor or very poor for all types of incidents. By October 2002, one in five still gave a poor rating for chemical incidents, 15% for biological incidents and 40% for radioactive incidents. A third reported that the Department of Health's capital allocation in respect of PPE and decontamination was not sufficient to meet current needs.
- The Service commented on the need to increase available resources (ambulances and staff) to deal with mass casualties in excess of 500. However, staff trained to deal with contaminated casualties, previously considered to be sufficient, had improved substantially by October 2002 with 130 Paramedics and Qualified Ambulance Technicians trained in clinical decontamination, which is double the amount of trained personnel compared to a year ago.
- The Service makes a distinction between PPE, which is rated as good, and equipment which it has consistently rated as poor or very poor for chemical and biological incidents in all three surveys mostly because of a change to the national standard but also because of a lack of appropriate equipment still to be identified and procured. The position regarding PPE is set to improve further as the Department of Health approved suits are delivered towards the end of November 2002, although the Service is concerned about funding the recurring costs associated with maintaining and replacing the one-off Department of Health issue. The Service also indicated that the one-off capital allocation for PPE and decontamination facilities did not meet its current requirements and was exploring how best to overcome this issue.

The London Ambulance Service

- 3 The London Ambulance Service is now much better prepared than it was before September 11. Since our survey in February 2002 preparedness has increased from "prepared" to "well prepared" for major incidents in general and from "not well prepared" to "prepared" for chemical and biological incidents. However, it is still "not well prepared" for incidents involving radioactive material (that is, radiological and nuclear incidents). Whilst the London Ambulance Service is "prepared" for mass casualty incidents, it commented that demands on LAS/NHS resources would clearly be stretched in such circumstances and there remained much work to do in London, particularly in the event of a mass casualty chemical or biological incident. The main points arising are:
- An assessment of risks post September 11, placed chemical and biological incidents higher than previously, and identified the need to plan for mass casualties at a much larger scale than hitherto. Plans had been revised to reflect the new risks and by the time of our October 2002 survey, mass casualty, chemical and biological incident plans had been tested through multi-agency live and table-top exercises and through a spate of suspect package incidents which necessitated the plans to be activated on several occasions and generated a new, more dynamic, operating regime. The most recent tests and activations had indicated that the Service was well prepared for dealing with chemical and biological incidents and prepared for mass casualty incidents. However, plans had not been tested for incidents involving radioactive material.
 - Decontamination facilities and capacity, rated as very good for chemical incidents, good for biological incidents and very poor for radiological incidents in the August 2001 survey, were rated as poor or very poor in the February and October 2002 surveys, mainly because of lack of capacity in the light of new risks and new standards for such facilities. By the end of November 2002, the Service should be in a much better position when the new Department of Health approved decontamination units have been delivered, doubling capacity. The Service commented that the Department of Health allocation will go some distance to considerably improving the ability to respond to clinical mass decontamination but that there was still some way to go. The Memorandum of Understanding with the London Fire Brigade will provide adequate mass decontamination facilities but not for clinical decontamination. Two live practices with the London Fire Brigade have taken place to validate and refine protocols.
 - Communications systems in general were tested regularly and rated as very good in our February 2002 survey and good in the October 2002 survey. However, the Service expressed concern that the interim issue and final PPE specifications do not provide for communications systems to allow effective communication amongst responding staff and with patients when responding staff are dressed in PPE. The service is working on solutions to this issue.

- Liaison arrangements with the other emergency services and responders are well established through the work of the London Emergency Service Liaison Panel, which has been in existence for over a decade. Since September 11, the Service has reviewed and formalised mutual aid arrangements with all appropriate services and organisations, especially the Metropolitan Police and London Fire Brigade. Finally, as the emergency arm of the Health Service it has worked closely with the Department of Health and Social Care for London to ensure that the appropriate co-ordination and command and control arrangements for health reflect the new challenges associated with September 11th.

Conclusion

London is now better prepared than before September 11. Preparedness for most types of incidents had improved substantially since our February 2002 survey. However, our October 2002 survey showed that a third of acute trusts and the London Ambulance Service were still not well prepared for incidents involving radioactivity. It also showed that whilst there have been improvements in capacity, particularly in respect of personal protective equipment and decontamination facilities, many issues remained and there was still much to be done. This, along with other important shortcomings in major incident planning (such as, training and testing of plans) means that a mass casualty incident or a hazardous substances incident on a large scale would challenge the NHS in London.

Annex H

Methodology

Census of health authorities and acute and ambulance NHS trusts

- 1 During August - September 2001 we conducted a self-completion postal survey of all health authorities and acute and ambulance trusts. Separate questionnaires reflected the different roles and responsibilities of these organisations. The purpose was to gather information about local major incident planning arrangements and to assess compliance with national guidance.
- 2 The survey questionnaires were designed to test compliance with the Department's guidance and standards, in particular the guidance issued in 1998. They were required to be completed by the emergency planning lead and validated by the Chief Executives. **Figure 38** summarises the information requested in the questionnaires.

38 Information requested in first postal survey

Major incident planning responsibilities and authorisation of plan

Number and details of major incidents for which plans activated

Strategic view of long term threats and impact assessments (Health Authorities only) and risk and hazard assessment

Plan review, update, distribution, testing and debriefing and spreading good practice

Staff training, adequacy of decontamination and communications arrangements and equipment, and resources

Role of health authorities in reviewing performance of trusts (Health Authorities only)

Internal and external co-ordination and liaison

Views on usefulness and completeness of national guidance

Self assessment of preparedness and comments on current difficulties in major incident planning

- 3 Our work was being completed in September 2001, when terrorist attacks took place in the USA. The Department of Health took action to improve readiness in the UK and health authorities and NHS trusts revised their major incident plans. We extended our study, and conducted a follow-up self-completion postal survey of all health authorities and trusts during February-March 2002. This was to update the information collected in our previous survey. Again three separate questionnaires were used.
- 4 The follow-up survey questionnaires were designed to gather information on whether improvements had been made to major incident planning in response to events of September 11 and test compliance with the new national guidance issued subsequently relating to mass casualty and chemical incident planning and the deliberate release of chemical and biological agents. The main areas of questions are shown in **Figure 39**.

39 Information requested in follow-up postal survey

Review and update of risk/hazards assessments (trusts) or long term strategic view and impact assessment (Health Authorities)

Review and update of major incident plans in response to the new national guidance issued post September 11, and whether changes were fundamental or minor

Testing of revised/new plans and outcomes

Health Authority review of trust plans and ratings (Health Authorities only)

Training and resources

Improvements in co-ordination and liaison. Cross border and cross regional mutual aid arrangements (Health Authorities and ambulance trusts only)

Views on adequacy of new guidance

Self assessment of improvement in preparedness compared to pre September 11 and overall preparedness for major incidents and mass casualty, chemical, biological, radiological and nuclear incidents

Views on preparedness of the other local emergency responders and the health economy as a whole

Transitional arrangements for Health Authority emergency planning responsibilities in the restructuring

- 5 For both the pre and post September 11 surveys trusts were asked to assess their preparedness for tackling major incidents. For both surveys we issued a reminder letter followed by a telephone reminder. We also provided the Department of Health with a list of non-respondents, who subsequently received a reminder from the appropriate Health Emergency Planning Advisors. These measures improved the overall response rates to a point where statistically valid conclusions could be drawn.
- 6 For the survey questionnaires there was a need to develop a format to enable easy yet accurate completion by trusts. We were aware from initial fieldwork that trusts were likely to be at various stages of preparedness to tackle major incidents, and the challenge was to develop categories of preparedness against which trusts could assess themselves that would give meaningful responses. In addition to the categories of "well prepared" and "prepared" we needed to provide the option of a third category that would indicate a lower standard of preparedness than the "prepared" category. Options such as "not prepared" were rejected as too extreme, and we agreed with the Department of Health that "not well prepared" would be appropriate to indicate this lower standard of preparedness. In discussion with trusts it is clear that they fully understood the significance of the "not well prepared" category.
- 7 The overall quantitative analysis of the completed pre and post September 11 surveys is based on the responses received by the final cut off dates. For the first survey we received 88 responses from health authorities out of 95 (92%), 29 responses from ambulance trusts out of 30 (97%), and 164 responses out of 189 acute trusts (87%). For the follow-up survey we received 76 responses from health authorities out of 95 (80%), 30 responses from ambulance trusts out of 30 (100%), and 155 responses out of 180 acute trusts (86%). We received a few late returns, after the cut-off dates for both surveys, which we included in our analysis of open questions as appropriate. The acute trust analysis excluded trusts not designated as receiving hospitals for casualties.
- 8 In October 2002 we conducted a further, limited 'snapshot' self-completion survey of all acute and ambulance trusts. This was at the request of the Department of Health, and the Accounting Officer encouraged all trust Chief Executives to take a personal interest in the completed questionnaires. Largely due to the limited time period in which to carry out this further survey response rates were relatively low - 80 per cent for ambulance trusts and 63 per cent for acute trusts.

Review of major incident plans and debriefing reports

- 9 We commissioned consultants to conduct an independent review of the quality of major incident plans and debriefing reports to assess compliance with national guidance and identify variations in quality and good practice. Plans were assessed against criteria developed jointly by the NAO and the consultants, based on national guidance, and agreed with the EPCU. Separate assessment criteria were applied to health authorities, acute trusts and ambulance trusts to reflect their different roles. The consultants were Dr Les Moseley, Director for Disaster Management, Coventry University and Mr Alan Parker of EPT Consultancy.
- 10 The criteria are shown in Annex F. Criteria are based on the main requirements in the Department's guidance, Planning for Major Incidents: the NHS guidance. Our consultants took a view on the relative importance of each part of the guidance to develop a scoring system, Annex F sets out the details. The approach was agreed with the Emergency Planning Co-ordination Unit.
- 11 We asked all health authorities and trusts surveyed to send us their major incident plans. We received seventy-two health authority, 116 acute trust and 20 ambulance trust major incident plans. These were reviewed in the period November 2001-January 2002. The few debriefing reports copied to the NAO were also reviewed.
- 12 A review of plans revised since September 11 was conducted in March-April 2002 to assess whether the quality of the plans had improved since 11 September. The original assessment criteria were revised slightly to reflect new guidance issued after September 11. We examined all the twenty health authority, 30 acute trust and 15 ambulance trust major incident plans received.

Qualitative interviews with EPCU, HEPAs, and other key emergency responders in each region

- 13 We held discussions throughout the course of the study with the Emergency Planning Co-ordination Unit to identify its role and responsibility for emergency planning. We attended the 35th Health Services Emergency Planning Conference held in February 2002.
- 14 During August - November 2001, we carried out site visits to all NHS Regions to conduct structured qualitative interviews with HEPAs to identify their role and work and to obtain their views about national and local major incident planning arrangements.

- 15 During the site visits we also held interviews with the local fire service, police service and local authority emergency planning representatives to obtain their views on collaboration and liaison with the NHS and their views on NHS major incident planning.
- 16 Detailed audit visits were carried out to two regional offices, West Midlands and Trent, during the pilot stage to discuss major incident planning arrangements and to discuss main issues in this area. We also held discussions with the nominated emergency planning officers at the organisations listed in **Figure 40**. In addition, we also attended a live multi-agency exercise at Birmingham Heartlands and Solihull NHS Trust.

40 Organisations visited during pilot stage

Sandwell Health Authority
 Leicestershire Health
 Sheffield Health Authority
 Birmingham Heartlands and Solihull NHS Trust
 University Hospitals of Leicester NHS Trust
 Kings Mill Centre for Health Care Services NHS Trust
 Nottingham Healthcare NHS Trust (Community)
 West Midlands Ambulance Service
 East Midlands Ambulance Service NHS Trust
 Leicestershire Constabulary

Review of published literature and international comparisons

- 19 We undertook a literature and internet search on the subject of major incident planning, particularly to identify good practice, and for identifying practice overseas. In addition, we obtained the views of two academics that direct courses on NHS emergency planning at the Home Office Emergency Planning College on the strengths and weaknesses of major incident planning in the NHS.
- 20 We contacted national emergency planning organisations in Sweden, France, Netherlands, Australia and United States of America to identify major incident planning arrangements abroad. We also visited the US where we held discussions at both the federal and state levels and with emergency planning staff at hospitals in New York and Salt Lake City. In addition, we employed a non-profit making organisation in Washington DC to undertake a snapshot telephone survey of a small number of US hospitals regarding their major incident planning procedures.

Wider consultation

- 17 We wrote to key voluntary organisations such as the British Association for Immediate Care Schemes (BASICS), Red Cross and St John Ambulance Service for their views on liaison and collaboration with the NHS on major incidents. We held discussions with Dr Ken Hines of BASICS and made use of his library.
- 18 We liased with the London Resilience Group who were reporting to the Civil Contingencies Committee on London's preparedness. More recently we have liased with the Defence Select Committee's staff in connection with the *Defence and Security in the UK following 11 September terrorist attacks* inquiry.