



Mass Casualties Incidents

A Framework for Planning NHS Scotland

Strategic Guidance for NHS Boards in Scotland

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(with acknowledgement to the Department of Health Emergency Preparedness Division)

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GLOSSARY

BASICS	British Association for Immediate Care
CBRN	Chemical, Biological, Radiological and Nuclear (incidents)
CCA	Civil Contingencies Act
CCS	Casualty Clearing Station (established near the site of a major emergency to treat and stabilise patients)
DH EPD	Department of Health Emergency Preparedness Division
EMDC	Emergency Medical Dispatch Centre (Ambulance Service)
GP	General Practitioner
HEMS	Helicopter Emergency Medical Service
MICC	Major Incident Co-ordination Centre (Department of Health, London)
MOU	Memorandum of Understanding
NHS	National Health Service
SARS	Severe Acute Respiratory Syndrome
SCG	Strategic Co-ordinating Group (multi agency group brought together to manage the response to a major emergency within its area)
SGHDs	Scottish Government Health Directorates
SGoRR	Scottish Government Resilience Room (co-ordination centre used by Scottish Government during major emergencies)
SORT	Special Operations Support Team (Ambulance Service)
SHAs	Strategic Health Authorities (in England)
UK	United Kingdom
USA	United States of America
USaR	Urban Search and Rescue

1. Introduction

- 1) This framework gives guidance and policy to assist the NHS to plan for a major incident of extremely serious proportions involving potentially large numbers of casualties – i.e. casualty numbers that are beyond the capacity created by the local implementation of major incident plans – or other major disruptive challenges to the delivery of health care, regardless of their cause.
- 2) Conventional accidents, public health emergencies – such as outbreaks of infectious diseases – or the accidental or deliberate release of radiological, chemical or biological material might all cause incidents with mass casualties. Although the probability of some of these events may be considered low, their impact would be significant and even potentially catastrophic to some functions of the NHS. Each will require some specific contingency and remedial measures, but this framework focuses on those generic aspects that all NHS organisations need to consider in developing their ability to respond to such events whatever the cause.
- 3) It is essential that there is good communication between different health care services in order to ensure that responses are structured and cohesive; thus primary care practitioners must be aware of any restrictions / limitations of secondary care that arise as a result of a significant event to allow them to make appropriate decisions about the management and referral of patients.
- 4) Throughout this document, the term emergency is used as in the Civil Contingencies Act 2004, i.e. to describe an event or situation that threatens serious damage to human welfare in a place in the UK, or to the environment of a place in the UK, or war or terrorism, which threatens serious damage to the security of the UK. To constitute an emergency this event or situation must require the implementation of special arrangements by one or more Category 1 Responders within the meaning of the Civil Contingencies Act.
- 5) The responses outlined in this guidance should only be considered appropriate in the event of emergencies that comply with the definition above. Ethical and medical legal advice and guidance which will support NHS organisations and staff in an appropriate escalation response will not be applicable in other circumstances.
- 6) This Guidance is built on best practice and shared knowledge, while also acknowledging that in certain circumstances restrictions or limitations of normal standards of care will be inevitable. It is intended to provide a platform for all NHS Boards to undertake major incident and emergency planning and to provide information on associated activities that may also be required.

7) Chief Executives of NHS Boards designated as Category 1 Responders in terms of the Civil Contingencies Act 2004, as the accountable officer, are responsible for ensuring that Boards maintain effective plans for the purpose of ensuring that if a major emergency occurs or is likely to occur Boards are able to perform their functions so far as necessary or desirable for the purpose of preventing the emergency, reducing, controlling or mitigating its effects, or taking other action in connection with it. Boards are also required to maintain plans for the purpose of ensuring, so far as is reasonably practicable, that if an emergency occurs they are able to continue to perform their functions.

8) This document focuses on planning, preparing and responding in the NHS in Scotland, recognising the need for a high level of networking with services provided in England and the other Devolved Administrations in order to support mutual aid arrangements.

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2. Background and Context

1) NHS Boards have demonstrated their ability to deal with major incidents, but now need to demonstrate their ability to prepare for, and respond to events that may result in patient numbers well in excess of those used in past planning assumptions. This requirement sits in the context of cross-government work to ensure that local communities are more resilient to a range of major disruptive challenges, whatever the cause.

2) Even considering the most serious major incidents the NHS have experienced to date, patient numbers have not been on the scale that could be described as mass casualty incidents. Figure 1 shows how this contrasts with other parts of the world that have experienced natural disasters such as floods, hurricanes or earthquakes.

3) Incidents resulting in very large numbers of casualties have fortunately not occurred in UK during the past few decades. However following the terrorist attacks in the United States on 11 September 2001 and subsequent attacks in Bali, Spain and London, this has set the level and pace at which planning for such incidents must be considered. The terrorist attack at Glasgow Airport on 30 June 2006, whilst not resulting in a mass casualty incident, also demonstrates that Scotland cannot consider itself immune from the threat of such events.

4) Furthermore, emerging infectious diseases, including an influenza pandemic, would result in significantly high numbers of the population becoming ill. Therefore, the potential for incidents that produce larger patient numbers has increased, and there is now a need to be prepared to respond to incidents of a different scale and nature than might previously have been thought.

Figure 1 Examples of complex incidents

Incident	Location	Fatalities	Injured
Terrorist attack - World Trade Centre 1991	United States	2993	8700
E.coli outbreak 1997	Wishaw	20	497
Bomb in a nightclub 2002	Bali	202	300
Multiple bomb attacks to a transport system 2004	Madrid	191	1900
Multiple bombings across the city 2005	London	52	650
Tsunami 2004	S.E. Asia	200,000+	unknown
Truck bombs 2003	Istanbul	57	700
Spanish flu 1918/1919 pandemic	World wide	250,000 (UK)	unknown
SARS outbreak 2002 - 2003	30 countries	900 (worldwide)	8000 (worldwide)

5) As part of wider cross-government work on resilience planning, a comprehensive cross-departmental civil protection programme has been established to strengthen planning and ensure greater resilience to a wider range and larger scale of disruptive challenges. This framework forms an important part of that programme and integrates into the processes being developed as part of the Capabilities Programme.

Response Framework

NHS Level	Description	No of Casualties	Local NHS Response	Scottish Response	UK Response
Major	Individual NHS Board handles incident within current and long established major incident plans	10's	Local NHS Board activates local command & control arrangements. Participate in local multi-agency command arrangements	NHS Board Performance Manager and NHS Scotland Resilience Team advised for information only	
Mass	A disastrous single or simultaneous event(s) or other circumstances where the normal major incident response of several NHS organisations must be augmented by extraordinary measures in order to maintain an effective, suitable and sustainable response	100's	Local NHS Board activates local command & control arrangements Requests mutual aid from neighbouring NHS Boards and/or neighbouring Strategic Health Authority in England, or N. Ireland if appropriate. Participate in local multi-agency command arrangements. Keep SGHDs briefed.	Scottish Government Health Directorates major emergency response arrangements activated. Facilitate requests for Scottish & UK mutual aid support. Participate in the cross-government response. Brief Scottish Ministers	DH EPD available to support SGHDs as required. Facilitate requests for UK mutual aid support. Participate in the cross-government response. Brief UK Ministers
Catastrophic	An incident that is of such proportions that it severely disrupts health & social care and other support functions (for example, water supply, electricity supply, transport etc). The required response exceeds collective local capacity	1000's	Local NHS Board activates local command & control arrangements Requests mutual aid from neighbouring NHS Boards and/or neighbouring Strategic Health Authority in England, or N. Ireland if appropriate. Participate in local multi-agency command arrangements. Keep SGHDs briefed.	Scottish Government Health Directorates major emergency response arrangements activated. Facilitate requests for Scottish & UK mutual aid support. Participate in the cross-government response. Brief Scottish Ministers Consider the implementation of revised clinical treatment protocols	DH EPD national Major Incident Coordination Centre activated. National coordination of NHS strategic response and mobilisation of national mutual aid efforts Participate in cross-government response including other Devolved Administrations.

3. Structure and Framework

1) Planning for incidents with mass casualties will need to reflect local circumstances, available capacity and build on what is already in place. This framework aims to provide practical guidance to inform and assist NHS organisations and healthcare providers - in partnership with other agencies - to plan their response effectively. It sets out to:

- a) Define a mass casualty incident for NHS purposes
- b) Look at some of the specific challenges they present to health services
- c) Suggest some possible operational contingency measures
- d) Consider the co-ordination and communication aspects

2) Due to the varying and complex nature of mass casualty events, this guidance should be seen as a framework for incident managers and emergency planners to use when planning for and responding to such incidents. The strength in applying this framework is for the response, and management to the emergency to remain pragmatic and flexible during what will be a most challenging experience for all concerned.

4. Definition of a 'Mass Casualty' event

1) For the purposes of this framework a mass casualty incident is defined as:

“a disastrous single or simultaneous event(s) or other circumstances where the normal major incident response of several NHS organisations must be augmented by extraordinary measures in order to maintain an effective, suitable and sustainable response”

2) By definition, such events have the potential to rapidly overwhelm - or threaten to exceed - the local capacity available to respond, even with the implementation of major incident plans.

3) The basic operational principles for dealing with an incident which results in mass casualties are the same as for a major incident and all NHS organisations must have contingency plans that:

- a) demonstrate that they fully understand the potential scale and nature of the disruptive threat(s) to their organisation and any actions that may be needed, through involvement in multi-agency risk assessments in their area
- b) include appropriate measures to prevent an incident, if possible, or to mitigate its effect on the health of the community

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- c) place particular emphasis on inter-operability and mutual aid between NHS Boards, and with neighbouring Strategic Health Authorities in England or N. Ireland if appropriate
- d) consider measures to utilise all existing NHS Scotland capacity in acute, primary, local authority, and independent care settings more intensively, taking into account the need for a sustainable response
- e) recognise the potential need to expand existing capacity to cope with larger numbers of patients, including the possibility of introducing revised treatment protocols
- f) include proposals to utilise and deploy staff differently where that is required
- g) facilitate joint working by adopting common core systems and equipment as far as that is practical
- h) promote and support a return to normality as soon as feasible
- i) undertake a structured debrief

5. Particular Challenges

1) Mass casualty incidents will involve a step change in the demands that are made on **all** parts of the NHS and partner organisations. Doing more of the same is unlikely to be adequate - organisations and their staff will need to adopt a different approach to their planning and response for such incidents in order to cope. For the response to work effectively there needs to be a whole systems approach into the way healthcare is delivered. This means all sections of NHS Scotland including primary care and acute sectors. The independent sector and voluntary sector partners also need to be engaged in any strategic emergency pre-planning work as well as the operational response.

2) The demand for increasing capacity in the community setting will require NHS Boards to plan closely with social care providers and local authorities to develop and utilise capacity outside the hospital environment. Community nursing teams, Allied Health Professionals, home helps, and home carers can play an important part in ensuring that patients discharged early can be cared for in the home. However it must be remembered that these groups of carers may too may be affected by illness, caring for their own families or transport difficulties.

3) In addition, this type of care will be vital in maintaining critical in-patient care capacity through reducing the need for patients to be re-admitted post discharge. This would be crucial during a rising tide incident, sometimes referred to as 'cloud on the horizon' - a developing infectious disease epidemic, or a capacity/staffing crisis, or a serious threat such as a major chemical or nuclear release developing elsewhere and needing preparatory action.

4) Some of the factors that distinguish a mass casualties incident from a more typical major incident are its likely scale, duration, intensity and the probability that there will be other compounding factors such as loss of services/infrastructure, shortage of essential supplies or the possibility of mass movement of the population as a result of the emergency.

5) They are likely to involve greater numbers, both in terms of casualties and fatalities, and could involve either incidents occurring simultaneously, or at multiple sites (either in close proximity or more widely spread). It is also likely that there will be significant media and public information challenges, which should be considered in local planning.

6) In addition to the demand for information from families of patients, the following groups of patients may make demands upon the NHS. Each patient will present specific clinical and managerial challenges in the areas of triage/treatment, capacity, co-ordination and communication across a wide area. Local NHS contingency measures therefore need to arrange for:

- a) treatment of those seriously ill or injured as a direct result of the incident, who require immediate treatment and care and who will probably need admission to an acute setting
- b) those affected by the incident who although not obviously or immediately suffering any serious illness or injury, need assessment and diagnosis, advice or treatment, may need subsequent monitoring and ongoing support that can often be better provided in a non-acute or primary care setting
- c) those people who are neither ill nor injured, but require information, advice and reassurance. Often referred to as the 'worried well'
- d) in addition, planning and response will need to ensure continued services for those who fall acutely ill (e.g. heart attack), but are not part of the major incident
- e) those patients in the community affected by the loss of service due to the impact of the incident and its response (i.e. dialysis patients, home oxygen patients)

7) It must be remembered that all patient types including patients who are being admitted from the wider population, will need to be treated against a backdrop of available healthcare capacity.

6. Types of incidents producing mass casualties and the challenges

1) No notice incident – a serious transport accident, explosion, or series of smaller incidents:-

- a) Caring for an increased number of potentially seriously ill or injured patients in the immediate aftermath of an incident(s) is almost certain to require different response measures. These may include remodelling triage protocols and increasing treatment capacity at the scene, or using all available resources and assets. This may include the use of non-NHS estate through the improvised use of other buildings and structures.
- b) This type of response could include buildings in the primary or community care settings or local authority or private premises with whom local agreements should have been made in planning for such incidents. Exploring and developing all such options during the planning phase will be vital in supporting the operational response.

2) One of the more challenging types of major incidents to respond to is a 'rising tide' event or 'cloud on the horizon'. These types of incidents evolve over a period of days or weeks, first with a slow impact, but then leading to a prolonged period of high impact disruption. These types of incidents can develop for a number of reasons. Some might be the result of a no notice incident (for example at a chemical installation) which initially produces no trauma casualties. However in days following the immediate population around the incident may start to present to primary care with signs and symptoms which are the result of a plume from the incident. Specific types of rising tide incidents could include emerging infectious diseases, such as Severe Acute Respiratory Syndrome (SARS) or an influenza pandemic.

3) These types of incidents will present very different challenges to no notice incidents and will need longer term crisis management input to ensure a sustained and effective response. The demand on the primary care sector will be greater and more sustained, with the potential need to consider focusing treatment at home rather than within the hospital environment, freeing in-patient capacity for the most seriously ill. During any rising tide incident there will be a need to ensure public information is available, and this will be crucial in promoting self-help advice allowing clinical staff to prioritise their time and treatment to patients.

- 4) The NHS will need to consider not only the clinical response, but also the wider impact of the incident on healthcare resilience. A rising tide event will place extreme resilience challenges on NHS infrastructure and support services, It is vital that all healthcare providers have effective business continuity management plans particularly regarding around the issue of staff resilience.
- 5) Chemical, Biological, Radiological and Nuclear (CBRN) Incidents present different challenges for all responders, and the NHS is no exception. In some CBRN scenarios the rapid decontamination and treatment of significant numbers of casualties will be critical both to the well-being of the patients and the management of the incident.
- 6) The Scottish Ambulance Service will maintain effective arrangements for the rapid deployment of trained Special Operations Response Teams (SORT) and for supplementing or relieving those teams by mutual aid from ambulance services in England and other Devolved Governments. In the event of large numbers of people requiring decontamination, fire service mass decontamination capability will be deployed to support the Scottish Ambulance Service.
- 7) Every acute hospital needs to develop internal plans for implementing rapid action to protect their capacity available by ensuring it retains control over access to its facilities. This may require planning for enhanced security measures to ensure access can be restricted to a single point of entry (likely to be in the vicinity of the Emergency Department). Hospitals with Emergency Departments should plan for a rapid expansion of the capacity of those facilities, and for supplementing staffing. Such plans will need to link to, and complement, the emergency services and local authority plans for multi-agency “command and control” of major incidents.
- 8) NHS Boards should have discussions with their local police force about the public order and control issues which could be associated with this level of self presenters, and should consider how they would handle such an influx of potential casualties. Any such plan must take into account that casualties may also be contaminated, and therefore the health & safety of NHS staff needs to be maintained.
- 9) Plans should also ensure that messages to the public can be disseminated in an effective manner and link into media management plans both within the NHS, and with other partner agencies especially the police.
- 10) Responding to a CBRN incident will often require a wider health response than just at the scene. There will also be a need to pass vital information which provides the public with ‘self help’ advice. Providing this advice early in an incident will assist in reducing the numbers of self-referrals to other parts of the healthcare system. Staffed by senior nurses and guided by clinical decision support software, NHS 24 is ideally

placed to rapidly implement sleeping algorithms which can be activated either on information that an incident has occurred, or when increased numbers of patient types are identified.

11) A covert CBRN incident will only first become apparent due to an increase in patients presenting for treatment. These patients may self refer over many days at several different locations, often within a primary care settings such as GP surgeries. Effective and rapid public health monitoring and health intelligence will be vital in identifying and containing the escalation of any such incidents. Health Protection Scotland and NHS 24 will play an important part in health surveillance identifying trends in illness across the population.

12) Wider health monitoring is also carried out by Health Protection Scotland. All parties involved in health monitoring and surveillance must ensure that any data, that needs to be shared during an incident, is shared in a timely and efficient manner.

13) All hospitals with Emergency Departments should have in place a capability to decontaminate small numbers of self referring patients. Equipment (and staff training) must be maintained to allow for rapid deployment if required. It is accepted that most hospitals would be put under severe strain by the scale and circumstances of an incident producing mass casualties who are contaminated. In developing their mass casualty plan, NHS Boards will want to work in close collaboration with the emergency services and with neighbouring NHS Boards. Issues that will need to be addressed will include:

- a) control of the site, including locking down the hospital site to control access to the building(s);
- b) mass decontamination;
- c) dealing with self-referrals;
- d) crowd management;
- e) the ability to create a triage/assessment facility as an adjunct to the Emergency Department to avoid cross contamination and unnecessary attendance within A & E departments

14) A hospital at the “heart of the storm” may particularly struggle with these demands, to the extent where its ability to maintain basic functions is challenged. The NHS Board require to take an overview of the incident and the response and determine locally how the consequences are to be managed as part of the multi-agency command and control response.

7. Evacuation of the local population

1) When considering incidents with the potential for mass casualties, there is a need to consider planning for the health consequences of the displacement of a significant number of the population. Whilst large scale evacuation will only be actioned as a last resort, health emergency planning must recognise that for

significantly disruptive incidents (e.g. wide spread flooding) large numbers of the population may need to be moved to a place of safety. Any large scale evacuation of a population will need a multi-agency response, and the health sector will play a vital role in the process. Whilst separate specific guidance will be issued on evacuation planning, the key elements which need to be considered by the NHS are:

- a) Maintaining primary care services to the population being evacuated, including special measures to offer support during the physical period of evacuation;
- b) Treating those people who have been injured during the evacuation process;
- c) Considering whether displaced patients have suitable access to the medication they need to control their chronic underlying conditions;
- d) Through close working with social services, identifying and giving support to vulnerable people and their families within the community being evacuated;
- e) All NHS Boards and in-patient care facilities should have plans in place to effect an evacuation if required. However, such plans should ensure that any evacuation of a hospital is seen as a last resort;
- f) NHS Boards must have plans to accommodate the provision of healthcare services for an influx of significant numbers of the population that may have been evacuated from a wider geographical area than has been considered previously;

Case Study

Thousands of race goers were evacuated from the 1997 Grand National meeting at Aintree. More than 1500 people were accommodated in emergency rest centres in Liverpool. GPs from the deputising service were deployed to make sure that people had emergency replacement medicines and their other health care needs were met.

Case Study – Hurricane Katrina

Hurricane Katrina of the 2005 Atlantic hurricane season was the costliest hurricane, as well as one of the five deadliest, in the history of the United States. At least 1,836 people lost their lives in the actual hurricane and in the subsequent floods.

2) Across the UK extra medical equipment is strategically placed which can be deployed to a wide range of catastrophic incidents. This equipment is designed to cater for CBRN exposure, and consists of e.g. ventilators, dressings and drugs. In Scotland this equipment is maintained by the Scottish Ambulance Service.

3) All requests from health professionals for deployment of this equipment to be dispatched should be made via Scottish Ambulance Service Emergency Medical Dispatch Centre (EMDC), Edinburgh. This equipment is part of a national resource and as such can be called upon to be used anywhere in the UK.

4) NHS Boards should have suitable arrangements with suppliers of critical services and supplies to ensure that supply chains to NHS Boards can be maintained during any major emergency.

8. UK residents involved in mass casualty incidents overseas

1) Recent global events have identified the need for the UK to be ready to receive UK citizens (both patients and worried well) who have been involved in a catastrophic incident outside of the UK. Whilst the immediate life saving element of the response will be managed locally, depending on the type and scale of the incident there may be a need for UK health assets to be engaged in multi-agency reception arrangements, mainly at principle airports. Experience suggests that these types of incidents are infrequent and each one will require a different response.

2) For these types of incidents the Department of Health Emergency Preparedness Division (DH EPD) will link into the wider cross-government response and liaise direct with Scottish Government and the relevant NHS Boards which may be affected by any repatriation or evacuation of UK citizens back to the UK post incident.

3) Although the majority of the people returning will present with only minor conditions, some people may have significant injuries which have been unnoticed during the evacuation process. Some people may also be suffering from mental health problems, post traumatic stress disorders, or bereavement as a result of the incident(s) they were caught up in. Therefore it is important that suitable triage, clinical assessment processes and ambulance transport arrangements are established at the receiving air and sea ports.

4) Sometimes the level and scale of the disaster overseas may prompt medical professionals in the UK to consider how they may be able to give direct assistance to the country affected. Whilst it is for each individual to make that judgement, it must be considered how this offer of assistance will dovetail into other international relief efforts. The Department of Health Emergency Preparedness Division as part of the cross-government response, will work with colleagues in the Devolved Administrations other UK Government Departments to identify any support which may be needed, and where appropriate circulate requests for assistance to the NHS within the UK.

5) Separate arrangements are in place for the reception and treatment of military personnel injured overseas. Mutual aid from overseas for mass casualty incidents occurring in the UK will be requested and co-ordinated via the Department of Health in London.

9. Developing capacity and sustaining patient care

- 1) During any type of incident that produces mass casualties managing capacity will be a significant challenge. NHS Boards must consider how they can increase and maintain extra capacity in the event of an incident involving large numbers of patients requiring treatment. For a no notice incident, although the demand in Emergency Departments may peak after several hours, it may still be very focused on one or two particular clinical specialities including theatres, critical care etc.
- 2) During a 'rising tide' incident, the impact would be less immediate, but build over a period, several days, weeks or months affecting both clinical care and NHS business continuity. Both types of incidents will have a longer term impact on healthcare and staff which will need to be managed. NHS Boards in Scotland have contingency plans in place for responding to an outbreak of pandemic influenza which should address these issues.
- 3) Incidents producing mass casualties have the potential to cause pressure on a wide range of clinical and patient care services, all of which would need to be utilised to the maximum. Depending on the circumstances of the incident, capacity may be limited by significant damage to the NHS infrastructure, for example, hospital buildings damaged by the blast from an explosion or the ability for the NHS to operate without full utility services, for example loss of electricity supply. It is therefore vital that all providers of healthcare services and NHS Boards develop effective business continuity management plans that reflect the need to maintain critical clinical and managerial functions during periods of disruptive challenges.

10. The best care under the circumstances.

- 1) Every day, the NHS manages the care and well-being of many people. Decisions around the clinical care of patients is often made as part of multi-disciplinary teams of specialists, providing in depth and complex care within established clinical protocols and guidance. However, during an incident that produces mass casualties, there may be a need to expand the capacity of certain types of specialities due to the type of incident, for example burns, paediatrics, etc.
- 2) Under these circumstances, there may need to be a temporary re-alignment of treatment protocols to reprioritise patient care. Whilst this will be for senior clinical leads to decide at the time and considering the circumstances, the aim during an incident producing mass casualties is to provide the best care possible, under the circumstances, within the healthcare capacity available. The process already takes place in part during smaller major incidents and utilises triage protocols to determine rescue, treatment and evacuation priorities. However, this is predominantly used in the pre-hospital or emergency department settings, but its principles may be useful to other areas of clinical work.¹

¹ DH EPD Emergency Planning Clinical Leadership Group (EPCLAG) is developing further guidance for clinicians on this matter.

3) Figure 2 shows illustrative planning assumptions that can be used to calculate the potential numbers of patients in each category. It is also vital for NHS Board plans to consider early in the activation stage of a major incident what the real-time point of criticality is, as internal factors (e.g. theatre closed for maintenance) will have an impact on the numbers of patients in each categories a trust may be able to manage.

Fig.2-

Category	Patient condition	% of total
<i>P1</i>	Casualties needing immediate life-saving resuscitation and/or surgery	25%
<i>P2</i>	Stabilised casualties needing early surgery but delay is acceptable	25%
<i>P3</i>	Casualties requiring treatment but a longer delay is acceptable	50%

Illustrative planning assumptions for preparing for mass casualties

11. Managing clinical care

1) Consideration must be given to the fact that incidents could occur which would be beyond those for which hospital buildings are designed to cope, and that this, combined with potential staff constraints, would have an impact on the way in which patient care could, and would, be delivered. Clinical input to identify the scope for adapting 'normal' clinical practices are essential to the development of an effective plan, which must recognise that in these circumstances, extraordinary measures will potentially mean doing something outside normal practice. There should also be consideration of how the return to normal services will be achieved and managed, including the impact on staff morale.

2) Contingency plans should also include active measures to supplement the maximum bed capacity available in acute hospitals. Plans must consider and discuss the use of non-acute NHS facilities, any independent sector capacity and/or the pre-identification of suitable accommodation that could be utilised if required in conjunction with local authorities.

3) NHS Boards need to ensure that providers of healthcare for their populations (e.g. General Practices, Community Services, Community Pharmacies, and independent sector providers) are planning to manage the impact of an incident that results in a large number of casualties effecting their service and staff.

4) Plans should include developing integrated arrangements to set up and provide facilities - preferably away from acute hospital sites - to assist in the triage, diagnosis, treatment and support of those patients who are not obviously seriously ill or injured. They should also consider contingencies to maintain patients in the community and limit or avoid referrals to acute hospitals as far as possible.

- 5) Arrangements for developing integrated arrangements in facilities not usually used for healthcare, should include the legal requirements for holding and providing medication e.g. secure handling of controlled drugs under the Misuse of Drugs Acts and other medication under the Medicines' Act.
- 6) Plans should also consider the extent to which community staff and general medical practitioners could be deployed to supplement acute services if that is required. These plans need to consider issues around clinical indemnity and support for colleagues who may be working in a different environment to their normal place of work.
- 7) Consideration must also be given to the role of NHS 24 in both the provision of advice and the triage of those patients using the service. NHS 24 is an essential part of the response to any incident, ensuring that appropriate advice can be provided and that only those patients who need to access primary or secondary care in an emergency do so. The aim of this whole systems approach to healthcare under these circumstances must be to admit to hospital only the most seriously ill or injured.

12. Staffing and workforce planning

- 1) The greatest constraint on expanding capacity is staff, and NHS Boards need to have appropriate business continuity plans in place to bring in additional staff across their local area. However, such plans must recognise the possibility of transport and communication disruption, which has the potential to impact on the numbers of staff available. These plans should also recognise the fact that staff (or their families) may well be victims of the incident, particularly if it is in the locality. This could potentially have a considerable impact on staff attendance and this must be considered when planning.
- 2) Plans must also consider that staff of all grades may find it difficult to focus on the response (including leading the response) until they are reassured that their family and friends are safe and well. Consideration should also be given to the need for counselling support for staff involved in a response from an early stage.

Case Study

Following the bomb attacks in London on 7th July 2005, the entire London Underground system was shut down. Whilst the system needed to shut for public safety reasons, this had an impact on the NHS as many staff used the underground to get to work.

- 3) Workforce contingency plans should also focus on pre-identifying (and enhancing) the emergency care, potential/skills of all staff, directing staff effort to key emergency roles, and sustaining activity levels well beyond the initial response phase. Careful planning should ensure that not all available extra staff are utilised within the first few hours or days of an incident, but staggered and rolling increases are considered to follow the peak demands that may appear throughout the incident.
- 4) These plans should also consider further training that would be required by those who would play a leading role in responding to and managing such an incident. This must include command and leadership training across the full spectrum of staff grades in all NHS organisations.
- 5) Staffing contingency plans should consider including pre-identified part-time staff who are willing to work additional hours. This may include staff employed by other organisations, including independent sector providers, qualified non-practising staff and those who have recently retired. However, planning assumptions of numbers of staff available should be considered against the fact that part-time staff may have already been considered in the 'head count' of another organisation.
- 6) Qualified staff working in non-patient contact areas should be identified and consulted on how their skills can be utilised within a clinical setting. Any discussions should also recognise that refresher training may be needed and may need to be programmed in to individuals' regular training calendars. Effective planning can identify a process for using staff in key roles which may not require clinically trained personnel.

13. Creating additional capacity

- 1) There are issues about the sustainability of arrangements, which involve existing staff working longer hours or more intensively, and the health and safety aspects of such arrangements. It must be recognised that staff can work exceptional hours, but for only a short period. Staff should receive clear information about what would be expected of them in an emergency and include appropriate training.
- 2) NHS Boards should identify unused physical capacity which could be brought into use in an emergency. This might include disused wards within NHS hospitals or intermediate care or community beds, or capacity in the independent or private sectors. When planning for care in the community careful consideration may have to be given to using ways of non-routine working which might be necessary within and outwith normal working hours.

3) Other less conventional options such as utilising hotels or schools or colleges may also need to be considered for less clinically dependant patients and where appropriate included in local planning. As part of planning local authority emergency planning officers should be consulted in advance with a view to identifying premises which might be used to accommodate the victims of mass casualty incidents.

Case Study

On 28th February 2001 near Selby, North Yorkshire, a commuter train derailed after hitting a car on the East Coast Main Line and collided with a goods train. Ten people died and many more were injured. The ambulance service utilised a large agricultural building near the scene of the crash to set up a Casualty Clearing Station (CCS) to triage and treat patients before transferring them to hospital. Seventy patients were finally transferred from the scene to six hospitals across two regions. Through establishing a temporary treatment centre in the nearby building, the most appropriate patients could be transferred in an appropriate manner by both ground and air ambulances.

4) Planning should also include using existing capacity more intensively to create extra capacity for a higher level of dependency. For example, some community or intermediate beds might be used to deliver acute care, or general acute beds used to create additional capacity for critical care or burns cases (with specialist staff). These plans should be consistent with plans to create additional hospital capacity for major outbreaks of infectious diseases.

5) Equipment and supplies issues, including the provision of medicines, bandages etc., should be addressed through local plans. These should be linked to national arrangements for stockpiling of CBRN countermeasures. Supply chains for critical items should be assessed and where necessary made more robust with consideration being given to the establishment of local stores holding a limited stock of priority items for use in an emergency.

14. Freeing existing capacity

1) The number of staff and the availability of other resources to deal with patients affected by a mass casualty incident can be substantially increased by redirecting the existing NHS resources, which are used to provide elective care towards emergencies. It is essential that a clear audit trail be maintained for any decisions that would affect any organisation's ability to deliver the full range of "normal" services, including those against which organisations, are performance managed. However, it is also important that this does not impair the ability to deal with what is, by definition, a challenging and exceptional situation.

Case Study

On 5 October 1999, two trains collided outside Paddington Station in London. 31 people were killed and 500 were injured. The London Ambulance Service declared a major incident and within two hours, 250 beds were made available across the NHS in London. Due to the incident occurring early morning, theatre lists could be cancelled or amended.

2) Capacity in hospitals should be freed by accelerating discharges where this is not to the detriment of the care of the patient. This should include bringing forward the discharge of elective patients, wherever possible, for example, by providing post-operative care in community settings. Plans should also include the prompt discharge of patients whose transfer from hospital care to the community has been delayed, e.g. where suitable long-term community placement is not available. Arrangements should be made for discharge to the community of as many such patients as possible including temporary discharge to community settings, without prejudice to their preference for their long-term care.

3) Plans for accelerated and temporary discharge of patients from acute beds should be developed in close partnership with primary and social care providers and the Scottish Ambulance Service. NHS Boards should also have arrangements with Primary Care and community services and the Scottish Ambulance Service to minimise the number of patients presenting at Emergency Departments during the mass casualty incident and arrange to treat as many patients as possible in the community setting.

15. Mutual aid and support

1) NHS Boards in Scotland have good working relationships with neighbouring NHS Boards, which during a major incident allow for any peak in capacity to be absorbed. Patients are often transferred to neighbouring hospitals if specialist capacity is required. However, during a catastrophic incident involving mass casualties, there will probably be a need to utilise capacity over a much wider geographical area than would otherwise be considered, and this may have to be managed through the Scottish Government Health Directorates.

2) Mutual aid may take many forms including lending staff or equipment, providing specialist staff, e.g. as part of a Burns Assessment Team or Site Medical Team, or agreeing to take patients from the affected area. Many existing agreements between NHS Boards for the supply or sharing of services have the characteristics of mutual aid arrangements and any new arrangements for dealing with mass casualty incidents should be built on these. Mutual aid arrangements between NHS Boards should be updated and exercised regularly.

- 3) To achieve the best possible care under the circumstances, patients may need to be transferred to different parts of the country. The UK now has a number of air ambulances. If utilised for inter-hospital transfers over greater distances they can make long distance transfers more clinically acceptable thus freeing up vital local ambulance and healthcare resources, however they may not be able to operate during adverse weather conditions.
- 4) NHS Boards and the Scottish Ambulance Service should engage with other air ambulance organisations to develop, at the pre-planning stage, a casualty dispersal plan, which may be more geographically spread than originally considered. This should also include the ability to receive casualties from other regions.
- 5) Where possible the Scottish Ambulance Service and other air ambulance organisations should consider the need to develop cross regional coordination of aero-medical assets during incidents with mass casualties, ensuring their potential patient benefits can be maximised. Consideration needs also to be given at the planning stage to the use of air assets to transfer resources rather than patients, for example, specialist staff and equipment.

Case Study

In June 1998, an inter-city passenger train crashed near the German town of Eschede. 100 people were killed and nearly 300 people seriously injured. A number of air ambulances responded to the scene and air lifted the patients to numerous hospitals. Due to the location of the incident, a small number of patients were air lifted to hospitals outside Germany, as air ambulances returned to their base hospital. The police then had to spend time tracing where patients had been transferred. This identified the need for more coordination of air assets deployed to the scene of major incidents.

- 6) Effective mutual aid across the health sector will require strong leadership and coordination by NHS Boards. Many incidents with mass casualties are likely to have an impact over a wider area than a single NHS Board. It is essential that NHS Boards are satisfied that effective mutual aid arrangements are in place within their region, and with neighbouring Strategic Health Authorities in England, and N. Ireland where appropriate.
- 7) Mutual aid to the NHS required from abroad will be co-ordinated by the Department of Health in London in co-operation with the Devolved Administrations or SHAs in England as required.

16. Military Assistance

1) The Scottish Government has an established mechanism for requesting assistance from the UK military during major incidents. However, it should never be assumed that military assistance would automatically be available or would be available without a lead in time. With the exception of immediate life saving action, any requests for UK military assistance will need to be carefully considered and should be directed at the time of the incident via the Police Incident Officer. Further information on military aid to civil authorities can be found at:-

<http://www.mod.uk/NR/rdonlyres/66E32920-1B30-4E37-A057-9FA26E07CC/0/ijdp02.pdf>

17. Acute hospitals plans

1) Acute hospital plans should build on local specific contingency measures that allow them to maximise their bed availability and rapidly free up capacity in conjunction with community and primary care partners. Those plans should include procedures for:-

- a) ceasing all elective activity;
- b) identifying patients suitable for rapid discharge;
- c) supplementing available equipment; and
- d) alternative use of specialist/day care beds

2) It is recognised that the capacity within specialties such as burns, paediatrics etc, during an incident with mass casualties may need to draw on support from further a field than local mutual aid plans cover. Some of this type of capacity may be best co-ordinated at UK level via Scottish Government linking with the Department of Health's Emergency Preparedness Division's Major Incident Coordination Centre.

3) Whilst the focus of effort by the NHS must be to the living, during any major incident, including a mass casualty incident, there is the potential for a number of fatalities. The police will manage those fatalities at the scene, however those who die within the hospital setting will need to be managed in accordance with normal hospital procedures, but considering any specific issues for example infection control. Depending on the nature of the incident, the principal problem will be the dignified and suitable temporary storage of the deceased. This is especially the case during an influenza pandemic.

4) Further consideration will be needed if it is the result of a CBRN incident, and the implementation of any special arrangements (e.g. access to gas tight body bags.) All acute hospitals should have plans that detail how excess deaths will be managed within the hospital environment. These plans will need to be developed in conjunction with the local authority and the police, and dovetail into other standing arrangements.

5) Further information on managing fatalities can be found at the Home Office website <http://www.ukresilience.info/publications/fatalities.pdf>

6) Following a mass casualty incident, large numbers of the public will seek information about friends and relatives who may have been affected by the incident(s). Hospitals should have, as part of their major incident arrangements, a mechanism to manage a significant number of people making contact either in person or by telephone and internet.

7) The first priority of healthcare staff when dealing with relatives who have arrived at the hospital will be to reunite them with patients who have been admitted. However, it is vital that when this occurs this information is passed to the Police Casualty Bureau. Callers and visitors unsuccessfully seeking relatives must be referred to the Police Casualty Bureau, which will provide definitive information about those affected by the incident.

8) It is important to manage people seeking information in an effective and sympathetic manner, to give them confidence that their concerns are being dealt with. Part of this is ensuring that plans are in place, in association with local police forces, to share information with the Casualty Bureau that the police will establish. These must also dovetail with local authorities plans for any provision of humanitarian assistance (for example Reception Centres). Addressing people's concerns in the best way possible will reduce the anxiety of those seeking reassurance about relatives, and decrease their search for information.

9) The police will deploy officers trained to document casualties to receiving hospitals to ensure that all known casualty information, including details of the deceased, is passed to the Police Casualty Bureau. NHS Board emergency planners and local police forces should work together to ensure that receiving hospitals have the necessary facilities for these police teams and that arrangements are appropriately exercised.

18. Scottish Ambulance Service

1) The Scottish Ambulance Service should have plans in place to develop capacity to rapidly deploy greater numbers of vehicles, staff and equipment to the scene(s). Establishing early command, control and triage arrangements at the scene(s) will be critical. Planning to supplement the resources available through rapid mutual aid and by additional steps such as the formation of ambulance service reserves will be vital to expanding capacity.

2) The use of non-emergency crews or support from local voluntary aid societies (British Red Cross and St Andrews Ambulance Association) needs to be explored at a local level. Most ambulance services operate first responder schemes, and this may be a source of additional support staff for use during a major incident.

3) Developing these plans further is likely to be dependant on local resources, which will vary around the country. However early discussions during the planning

phase will allow local plans to reflect local capacity. The Scottish Ambulance Service along with NHS Boards must, as a matter of necessity, ensure that as soon as casualty receiving hospitals are identified the Police Forces concerned are informed in order that police documentation teams may be deployed to those hospitals. The primary responsibility for this will be the Ambulance Incident Commander at the scene(s) in association with the Police Incident Commander. If local capacity is to be increased using volunteers, pre-incident training and exercising will be vital in developing an effective and sustained response.

4) Additional measures to release experienced ambulance personnel from the transport role would improve triage and treatment capability at the scene and make additional trained personnel available for specialist tasks such as decontamination. Emergency Care Practitioners may be usefully tasked with more appropriate triage, treatment and discharge at scene or supporting the primary care effort at local authority rest centres. Effective use of medical care services including Immediate Care Scheme (BASICs) doctors at the scene will also make a key contribution.

5) Due to the potential scale and physical disruption to buildings and structures, releasing entrapped casualties may take longer and be more complex than other types of incidents. It is important therefore that medical personnel, co-ordinated and led by the ambulance service, develop and train to work with fire and rescue service personnel who are practiced in the role of Urban Search and Rescue (USaR). Working as a team of specialists, this combined fire and medical skill will ensure that vital (and potentially limited) clinical and rescue resources are used to the patients best affect, safely.

6) Due to the complex nature of this work, a Memorandum of Understanding (MOU) between the fire and rescue service and the Scottish Ambulance Service should be agreed which clearly states the roles and responsibilities of the two services when engaged on USaR work. The MOU should also clearly specify how joint training should be established between the two services and how a robust and resilient response capability will be maintained. Whilst the MOU for USaR will be different to the CBRN MOU, the two must complement each other.

7) NHS Boards and the Scottish Ambulance Service routinely participate in the pre-planning of medical arrangements at large crowd events, for example music concerts and sporting events, and therefore have a key role in trying to prevent incidents occurring, which may cause mass casualties. Whilst the Scottish Ambulance Service may not automatically be contracted to provide the medical cover on site, NHS Boards, as part of the licensing process, should assess the proposed level of medical provision and consider it in line with the Event Safety Guide. This assessment should also ensure that medical cover is appropriate for any specific risks on site, and is of a suitable level to reduce any impact, where possible, on the local NHS.

8) In addition NHS Boards should ensure that where several medical providers are utilised in delivering the on site medical service there is effective co-ordination arrangements in place between all medical providers, which dovetail with NHS major emergency arrangements.

19. Protecting and sustaining capacity

1) A high priority during mass casualty incidents is to limit the extent to which the incident, or its consequences, degrades and affects the care of victims of the incident. An incident may disrupt essential public infrastructure and plans may need to include the protection of hospitals and other NHS resources at a time of civil dislocation.

2) Plans should address both short-term and long-term issues and acknowledge that full recovery from the mass casualty incident may take months or even years. Short-term issues will include the sustainability of arrangements that involve staff working additional hours and the ongoing care of critically ill patients who were within the hospital prior to the mass casualty incident.

3) NHS Boards should develop their plans in partnership with other organisations engaged in resilience planning and interface with Strategic Co-ordinating Groups. Plans may need to include more specific arrangements such as responding to media interest, or the interface with social services which details helping to care for patients decanted from hospital. Depending on the type of incident communication strategies will need to be agreed to help with the cascade of public health information.

4) Utilising retired medical staff or medical students is one option for producing additional resource. For medical students, the ability to gain experience during a major incident has the potential to be a valuable part of their training. However, there is the need to ensure that clinical governance issues, including insurance indemnity, is considered before these staff groups are operationally deployed. NHS Boards which rely on these staff groups to support and increase capacity must ensure that suitable and effective training (including refresher training) is provided.

20. Strategic command arrangements

1) Major emergencies are best co-ordinated at Strategic Co-ordinating Group (**SCG**) level. Even incidents which affect more than one SCG are often best left to those SCGs to respond using local networks and resources. However for bigger, more wide-spread incidents, coordination at Scottish Government level may be required. When required this co-ordination will be through the Scottish Government Resilience Room (**SGoRR**) with input from the Scottish Government Health Directorates as required.

- 2) NHS Boards placed under severe pressure by the major emergency may need to call on mutual aid from NHS Boards and organisations with whom they do not normally interface or exercise. If required this level of mutual aid may be co-ordinated through the Scottish Government Health Directorates.
- 3) For events that require mutual aid on a UK wide scale, the Department of Health (DH) will activate its Major Incident Coordination Centre (MICC) in London, and implement national co-ordinating arrangements. These arrangements are intended to support the Devolved Administrations and SHAs in England to ensure wider NHS resources are made available and wider UK Government assistance is accessed, as required.
- 4) An example of this may be the need to utilise a particular medical speciality such as burns beds which requires a response from across the UK. In these circumstances, the DoH MICC may need to be activated to give support to Scottish Government and NHS Boards, although in Scotland the first point of contact would be the National Managed Clinical Network for Care of Burns.
- 5) Alternatively, a number of simultaneous incidents may have occurred across the UK or internationally, which collectively require a national overview of the impact and demand on healthcare resources. Again the DoH MICC would fulfil this role, but would be sharing information with NHS Scotland and other Devolved Administrations.
- 6) In the event of a UK wide health emergency, for example an influenza pandemic, the DoH MICC would be established to act as the lead UK Government Department's coordination centre and would link into Strategic Health Authorities in England and the Devolved Administrations.
- 7) Due to the nature of the incident, it may also be necessary to provide accurate and timely briefing as part of the UK Government response to an incident. In these circumstances, the Department of Health's Emergency Preparedness Division may need to liaise with the Devolved Administrations, but not formally activate a full Major Incident Coordination Centre in the first instance.
- 8) A 24-hour major incident line number (0845 000 5555) is operational which, out of hours, ensures the on-call Department of Health's Emergency Preparedness Division duty officer is contactable and the appropriate response can be actioned. This arrangement links into the Scottish Government Health Directorates' own 24/7 call out arrangements via the SGDHS' on call officer by paging 07699 756 773.

21. Co-ordination and communication

- 1) Multi-agency command and control arrangements across police force areas would provide the basis for linking in the co-ordination of the local NHS response with partner agencies. However responding effectively to an incident on this scale is likely to require a degree of central health coordination and control which is beyond that seen in the day-to-day management of the NHS. The Scottish Ambulance Service will establish its Strategic Co-ordinating Centre to ensure an effective response is provided in Scotland.
- 2) The impact of a genuine mass casualty incident is likely to challenge severely the management capacity of individual NHS Boards. NHS Boards must understand the need for a management structure in a mass casualty incident to make decisions beyond those which could possibly be planned for. However, they will want to have a clear understanding of how things will be organised and particularly of who is directing resources.
- 3) The Department of Health in London will establish UK national co-ordinating arrangements to link in with those of the Devolved Administrations if an incident escalates outside the capacity of any one region of the UK, or where the incident has a UK wide impact. This will involve a national operations room to support Strategic Health Authorities management of the incident in England, and to act as a focal point across UK Government including the Devolved Administrations.
- 4) There must be effective communication with other agencies and the public. Communications on operational NHS issues, such as where to go for treatment or advice, must be closely tied to public health information provided by NHS Board Directors of Public Health and Health Protection Scotland. This must include NHS 24, as a vital element of any communications strategy. These integrated health communications strategies must in turn be linked to communications plans of the Scottish Government, local authorities, the UK Government, and where necessary the other Devolved Administrations.
- 5) There will also be a strong desire from the public for authoritative information on all health aspects of the incident: health risks arising from the original incident, self care, how to get treatment, and any further potential hazards to health. Consideration needs to be given to the use of NHS 24 to ensure that consistent health messages are available and to help reduce the pressure on other health services. There may be a great deal of inaccurate information circulating about the health affects of the incident and possibly some degree of public anxiety. This should form part of the coordination of the multi-agency Strategic Command, to ensure that public anxiety is kept to a minimum.

6) Guidance to the NHS in Scotland on managing the response to the media is given in “**National Health Service in Scotland Manual of Guidance: Responding to Emergencies, Annex ‘O’, Arrangements for Liaison with the Media**”.

http://www.sehd.scot.nhs.uk/emergencyplanning/Documents/annex_o.htm#top

7) Following any major incident, it is crucial that a full debrief is completed to identify lessons learnt. This should be seen as an important milestone in the process of returning to normality.

22. Summary

1) Dealing with any incident that produces mass casualties will be a significant challenge to everyone who is engaged in the response. The impact on staff, patients and the public should not be underestimated. Whilst most people working in the NHS have experience of working during difficult and pressured incidents, responding to some of the more catastrophic events can only be achieved through pragmatic pre-planning and regular training and exercising.

2) Training and exercising needs to build on what is already in place. Key to this will be building and maintaining confidence in staff of all grades to work under extreme circumstances, and this will set the foundation for delivering the best patient care possible to all those affected.

3) There will be interdependencies between teams internally within the NHS but also multi-agency teams externally. Only through viewing the response as a whole-systems approach to delivering health care during a crisis of this scale will the most appropriate treatments be delivered to the most number of people. It must be remembered that each and every member of staff will play an important part in the overall response to a mass casualty incident.