Major incident planning in South East Thames Region: a survey of medical staff awareness and training

L. BRENNAN, F.J. SAGE and A. SIMPSON

Department of Anaesthesia, Medway Hospital, Kent

SUMMARY

In order to assess awareness and training of medical staff in major incident planning and disaster medicine, a telephone survey was conducted throughout South East Thames Region. Duty consultants and trainees in anaesthesia, general surgery and orthopaedic surgery from a total of 17 hospitals in the region were included. Accident and emergency (A&E) consultants were also interviewed in order to assess administrative aspects of major incident planning.

It was found that major incident plans were updated regularly in all the hospitals that were surveyed. Training exercises had been held in 88% of hospitals and the majority had tested communications only. All consultants and 77% of trainees knew that their hospital had a major incident plan. However, only 39% of trainees had been given any major incident plan related literature and less than a third of all staff had attended a major incident plan orientation session. Over half of all staff expressed confidence in their personal training in disaster medicine, but few had received relevant tuition. Of all non-A&E personnel, 5% had attended an Advanced Trauma Life Support (ATLS) provider course.

We conclude that major incident plans are in place and are updated in all the hospitals surveyed. However, all staff lack training in clinical and administrative aspects of major incident planning and disaster medicine. Recommendations to improve this situation are made.

Key words: disaster medicine, major incident, staff awareness, training

INTRODUCTION

The Department of Health circular of October 1990 requires all regional health authorities to ensure that comprehensive plans for dealing with major incidents are in place at district level and are updated regularly. It also requires listed hospitals to ensure

that relevant medical staff (including locums) are made aware of their responsibilities in the event of a major incident and that regular training exercises are held.¹ A recent survey of the 46 hospitals served by the London Ambulance Service found that, of those who had replied, a minority had fully updated their major incident plans according to current guidelines.²

Recently, we carried out a survey of trainee staff awareness of the local major incident plan in Medway Hospital and of their degree of training in disaster medicine.³ Our survey revealed that no literature relating to the major incident plan had been circulated to trainee staff, few had ever been involved in any training exercises at any stage in their career and that only 13% appeared to have had any sort of appropriate training for dealing with major incidents. In a recent report the Association of Anaesthetists considered major incident management and recommended that medical staff should receive appropriate training such as participation in an ATLS provider course or attendance at disaster medicine meetings or symposia.⁴

As the survey revealed a worrying lack of awareness of major incident management in trainee staff in the district, it was decided to clarify the situation by extending the study to include all hospitals with major incident plans in South East Thames Region and also include relevant consultant staff. In order to assess administrative aspects of major incident planning it was also decided to interview the A&E consultants in each of the hospitals surveyed.

METHODS

The study took the form of a telephone survey of the 17 hospitals in South East Thames Region with A&E centres which were known to have major incident plans.⁵ The duty consultants and registrars in general surgery, orthopaedic surgery and anaesthesia were contacted and interviewed using a questionnaire (Fig. 1). In a few instances a registrar was

Correspondence:
Dr L. Brennan,
Senior Registrar,
Department of
Anaesthesia, St.
Thomas's Hospital,
London SE1 7EH,
UK

Fig. 1. Questionnaire for non-A&E consultants and trainees

Hospital

Specialty

Grade

(1) Were you aware that a major incident plan has been devised for this hospital?

(2) Have you ever seen a copy of the plan or any part of it relevant to you?

(3) Have you attended any formal training session to familiarise you with the major incident plan in operation in this hospital or in any other hospital in which you have worked?

(4) Have you ever been involved in a real major incident alert or full scale training exercise?

(5) Do you feel that your training in disaster medicine is adequate to deal with a major incident alert?

(6) Have you attended any of the following:

ATLS provider course

Disaster medicine meetings/symposia

Formal training in triage

Formal lectures on disaster medicine related topics e.g. management of major burns, management of bomb/blast injuries or injuries resulting from chemical spillage.

not the most senior trainee on duty in which case the appropriate senior house officer or senior registrar was interviewed as appropriate. In addition, the A&E consultant in each of the hospitals was also contacted and surveyed using an alternative questionnaire (Fig. 2). This was carried out in order to assess administrative aspects of the local major incident plan. A&E consultants are either directly responsible for or are closely involved in major incident planning in all of the hospitals surveyed (Barnes, personal communication). The A&E consultants were also asked whether they had attended an ATLS provider course. All communications were made during normal working hours and as far as possible each individual hospital was surveyed during one working day.

Fig. 2. Questionnaire for A&E consultants

Hospital

(1) Has your major incident plan been implemented within the past 10 years?

(2) Has your major incident plan been updated within the past 5 years?

(3) Have you held a major incident plan training exercise within the past 5 years?

(4) Did this exercise involve:

Testing communications only.

Full scale exercise.

(5) Is there any formal training to orientate non-A&E personnel to the major incident plan on joining the staff of this hospital?

(6) Is there any in service training in disaster medicine for non-A&E staff in this hospital?

(7) Have you attended an ATLS Provider Course?

RESULTS

A total of 51 trainees (100%) and 48 consultants (96%) were successfully interviewed. One consultant could not be contacted despite repeated attempts and two consultants declined to be included in the survey. A total of 17 A&E consultants were interviewed.

Major incident plan awareness

Although a high percentage of trainees and all the consultants were aware of the existence of their local major incident plan, a minority of trainees had seen the whole plan or the part relevant to them. Less than 30% of consultants or trainees had attended a formal session concerning the major incident plan for the hospital in which they were working (Table 1).

Major incident experience

A relatively high proportion of consultants and trainees had been involved in a real major incident

Major incident planning

Table 1. Major incident plan awareness

	Trainees (%) (n = 51)	Consultants (%) (n = 48)
Aware of MIP* existence	39 (77)	48 (100)
Seen whole MIP or relevant action card	20 (39)	45 (94)
Attended MIP orientation session	15 (29) [†]	12 (25)

* MIP, major incident plan.

[†] Includes two trainees who had attended orientation sessions while working abroad.

alert at some stage in their career. Experience of full scale exercises involving mock casualties and the emergency services were less common, especially amongst trainees (Table 2).

Disaster medicine training

A majority of staff in both groups expressed confidence that their personal training in disaster medicine was adequate for dealing with a major incident alert. However, only a small number of either group appeared to have received relevant training in disaster medicine such as attending an ATLS provider

course, training in triage or attending relevant disaster medicine related lectures. An exception to this was the relatively high proportion of trainees who had attended lectures on burns management (Table 3).

Major incident plan administration

The survey of A&E consultants revealed that all the hospitals had updated their major incident plan within the previous 5 years and almost half had needed to activate their plan within the past 10 years. Full scale exercises had occurred in less than a quarter of hospitals in recent years but communication only exercises had occurred much more commonly. In service training on disaster medicine and major incident plan orientation sessions for non-A&E staff were uncommon (Table 4).

DISCUSSION

Although far from comprehensive, this survey reveals some potentially worrying deficits in major incident readiness amongst medical staff in South East Thames Region mirroring the findings at District level. It follows the recent King's Fund Institute report which highlighted problems in the health service response to major incidents in London.²

	Trainees (%)	Consultants (%)
Involved in real alert	*21 (41)	17 (35)
Involved in full scale exercise	9 (18)	16 (33)

* Includes seven trainees involved in real major incidents while working abroad.

Table 2. Major incident experience

	Trainees (%)	Consultants (%)
Felt personal training adequate	26 (51)	28 (58)
Attended ATLS provider course*	4 (8)	1 (2)
Attended disaster medicine meetings/symposia	3 (6)	3 (6)
Trained in triage	7 (14)	5 (10)
Attended lectures on		
Blast injuries	3 (6)	2 (4)
Major burns	13 (26)	5 (10)
Chemical spillage	5 (10)	2 (4)

* Thirteen of the 17 A&E consultants (76%) had attended an ATLS provider course.

Table 3. Disaster medicine training

Table 4. Major incident plan administration

	Hospitals (%) (n = 17)
MIP* activated in past 10 years	8 (47)
MIP updated in past 5 years	17 (100)
MIP exercises in past 5 years	
Communications only	11 (65)
Full scale	4 (23)
Neither	2 (12)
MIP orientation for non-A&E staff	3 (18)
In-service training on MIP related topics	2 (12)

* MIP, major incident plan.

In our survey, the high level of awareness of the existence of the local major incident plan amongst consultant staff was mostly as a result of plans being circulated to senior staff in the majority of institutions. A smaller proportion of trainees had seen a copy of the major incident plan or section which is relevant to them. Although it is unrealistic to expect individual members of staff to be familiar with the entire plan, all staff with specific duties should have these responsibilities summarized in individual action cards.⁶ Action cards should be issued to all new members of staff who are likely to be involved in a major incident alert as detailed in the Department of Health guidelines on the subject.¹ Short-term locums should have easy access to the appropriate action card via the A&E department.

Few staff would appear to have received any formal instruction concerning the local major incident plan. It has been suggested that part of the induction programme for all new hospital staff could fulfil this role, whereby a short summary of the major incident plan could be presented.⁷ We would also suggest that the trainees staff handbook might also contain a section on the local major incident plan.

In the absence of a real disaster the only way to be certain that a major incident plan and the staff involved will be able to function successfully is to hold an exercise. Disaster exercises may range from simple communication exercises whereby switchboard operators attempt to contact all staff they would have to reach in the event of a major incident to full scale exercises involving mock casualties and the emergency services. There is controversy over the value of full scale exercises with some suggesting that they can degenerate into farce, notwithstanding the high cost involved.⁶ However, other authorities do strongly advocate exer-

cises and go so far as to recommend annual full scale exercises in order to improve liaison between the emergency services.⁴ In our survey a minority of staff had been involved in simulated alerts and less than a quarter of hospitals had held a recent full scale exercise. It is worrying to note that two hospitals had held no recent test of their major incident plan.

The personal level of training in disaster medicine was also assessed in this survey and found to be lacking. Although over half of all staff felt that they were trained adequately to deal with a major incident alert, the majority did not appear to have the appropriate training as defined in the Association of Anaesthetist's report. Only 5% of non-A&E staff surveyed had attended an ATLS provider course and of these only one was a consultant. Of the A&E consultants the figures were better but still rather surprisingly, did not reach 100%. The Royal College of Surgeons has recommend that doctors managing trauma should undertake ATLS provider courses and they are specifically recommended in the Department of Health circular on major incidents for staff involved in mobile medical teams.⁸ A recent survey has shown that 56% of mobile team leaders received no specific disaster medicine related training.⁹ Although the number of provider courses has increased markedly in the past few years — with 46 courses held in 1991 — there is a significant shortfall, as many of the staff surveyed had found difficulty in being accepted onto a course.¹⁰

Besides participation in ATLS courses, a minority of those surveyed had attended other symposia or lectures relevant to the practice of disaster medicine or training in triage. The value of training in triage for mobile team leaders has recently been emphasized.¹¹ Of the trainees, all those who had received triage training had done so while serving in foreign armed forces and all of the consultants had gained their triage experience in military service, often many years previously. It is disappointing to note that only two hospitals provided any coordinated in-service training for disaster medicine related topics.

In summary, although major incident plans are in place in all hospitals in South East Thames Region and are regularly updated, there is a lack of training of staff of all grades in both clinical and administrative aspects of major incident planning and disaster medicine. The attitude that 'it will never happen to us' is not borne out by our data with nearly half the hospitals surveyed activating their major incident plan in the past 10 years. It has been suggested that

provision of on site medical services at major incidents should be taken out of the hands of local mobile medical teams. It is suggested that mobile teams based on a few large centres would provide the necessary high level of expertise.¹¹ Others have seen a key role for the members of BASICS (The British Association for Immediate Care) in conjunction with experienced ambulance paramedics.²

Clearly radical changes to our present system of major incident management would take some time to introduce. However it may be possible within the present framework to improve upon the problem areas highlighted by this survey. We would therefore make the following recommendations:

(1) All new front-line medical staff should attend an induction course where an overview of the local major incident plan is presented. All staff should have ready access to an appropriate action card. The trainee staff handbook should contain a summary of the major incident plan.

(2) Advantage should be taken of all opportunities to participate in full scale exercises involving all the emergency services.

(3) The local major incident plan coordinator (usually the A&E consultant) should institute a series of open lectures on relevant topics, such as: initial assessment and management of the patient with multiple injuries; bomb and blast injuries; head and spinal cord injuries; and severe burns.

(4) Staff (especially potential mobile team members) should be encouraged to attend relevant symposia and courses, especially ATLS provider courses.

REFERENCES

1. Department of Health (1990) *Emergency Planning in the NHS: Health Service Arrangements for Dealing with Major Incidents*. Health Circular HC 90 25. HMSO, London.
2. King's Fund Institute (1992) *Too Many Cooks? The Response of the Health-Related Services to Major Incidents in London*. King's Fund Institute, London.
3. Brennan L. & Simpson D. (1992) Major incident plans. *Anaesthesia* **47**(1), 74–75.
4. Association of Anaesthetists of Great Britain and Ireland (1991) *The Role of the Anaesthetist in the Emergency Service*. London.
5. Acute Services Strategy Group (1991) *Shaping the Future: A Review of Acute Services*. South East Thames Regional Health Authority, Bexhill-on-Sea.
6. Miles S. (1991) Major Accidents. In: Skinner D., Driscoll P. & Earlam R. (Eds). *ABC of Major Trauma*, pp. 96–100. British Medical Journal, London.
7. Savage P.E.A. (1979) *Disasters. Hospital Planning. A Manual for Doctors, Nurses and Administrators*. Pergamon Press, Oxford.
8. Royal College of Surgeons of England (1988) *Working Party Report: Management of Patients with Major Injuries*. Royal College of Surgeons, London.
9. Cooke M.W. (1992) Arrangements for on scene medical care at major incidents. *British Medical Journal* **305**, 748.
10. Nolan J.P., Forrest F.C. & Baskett P.J.F. (1992) Advanced Trauma Life Support Courses. *British Medical Journal* **304**, 654.
11. Nancekieve D. (1992) On site medical services at major incidents. *British Medical Journal* **305**, 726–727.