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SIMULATED INTERACTIVE MANAGEMENT SERIES

Article 12. Major incidents, leadership, and series summary and review

S McCormick, J Wardrope

Emerg Med J 2003;**20**:70–74

This last article in the series focuses on the impact of a major incident in the emergency department, leadership qualities, and summarises the topics discussed in the previous papers.



To understand this article fully you must read the extra information on the journal web site (www.emjonline.com)

MAJOR INCIDENT

The last article described a serious incident where a transit van was driven into the accident and emergency (A&E) resuscitation room, starting a fire and killing at least one senior staff member. It rendered the consultant on call unconscious and caused an unknown number of patients with serious injuries. All departments will have practised the response to an external major incident but how many could cope with an “internal major disaster”?

The nurse in charge started the fire drill and the department was emptied. Omar, the SpR, called the switchboard and put the major incident plan into action. He phoned Dr York, the other consultant, and the ambulance service to let them know the department was out of action. There followed a chaotic two hours. The department was cleared, sick patients to the medical admissions unit and the minor injuries told to seek help in nearby units or with the GP out of hours service. The seriously injured were moved to theatre recovery for resuscitation and assessment. The fire service brought the fire under control. Within 20 minutes the staff alerted by the major incident procedure began arriving to help the resident staff who had had to start the resuscitation process. Within two hours all the patients injured in the incident had been treated, Mr London was still in theatre, and two patients were on ITU.

Dr York then considered the department’s “internal disaster plan”. This relocated the A&E unit to the day surgery unit, which had areas for reception, assessment, and resuscitation. A decision was made to open this to medical emergencies such as cardiac arrest and myocardial infarction but the ambulance service was asked to continue to take serious trauma to the nearest fully functioning A&E.

By 0900 on the morning after the event an A&E service was running out of the day surgery unit. There was a huge amount of work to do. Rebecca Devon took on a lot of the tasks required for running the department leaving Dr York time to finish the de-briefing of staff and leading the whole hospital response.

This department now has a mountain to climb to rebuild their service with half the department destroyed and key members of senior staff dead or on the ITU.

The subsequent events are recorded in St Jude’s diary (www.emjonline.com/SIMS/12).

THE COMPUTER PORNOGRAPHY PROBLEM

There has been a serious breach of normal computer protocols and someone has downloaded pornography from the internet. Unfortunately the computer is not password protected (the main hospital system is password protected but this was the departmental “education and research computer”). Investigation of the records is not fruitful in identifying the culprit. The offending material has been deleted and a password identification system is instigated. Most hospitals now have a written policy on the safe and correct use of computers. Users often have to sign an undertaking that they accept the conditions of use and these always include prohibitions on downloading of pornography and the use of offensive and demeaning language. All staff are reminded of their responsibility to use computers within such codes of conduct and that breaches will be a disciplinary offence.

TIME OUT: MAJOR INCIDENTS

A major incident occurs when the number and rate of presentation of patients or the severity of their injuries exceeds the capacity of normal hospital processes. St Jude’s has, quite literally, been struck by a major incident. An “internal major disaster” is perhaps the most challenging time an A&E department will face both clinically and managerially. Such events do not occur frequently but they do occur regularly¹ and the most important part of dealing with a major incident is preparation. All hospitals are required to have a major incident plan that lays down the principal responses to such incidents. It is also good management practice to have a plan outlining the actions to be taken if the department is put out of action due to flood or fire. However, the combination of a major incident and loss of the A&E department is a scenario no one would like to face.

Listing the fine details of major incident planning is beyond the scope of this article. The NHS Executive has published such detailed guidance and a visit to the Department of Health web site for major incident planning is a “must do” for all involved in this planning.² Courses are available to learn the specific management skills required in the running of a major incident such as the ALSG MIMMS course.³

The role of an A&E consultant in major incident planning

The A&E department is the usual point of entry to a hospital and the primary clinical area involved in the early crucial stages of the plan. An A&E consultant should lead this project. While a major

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incident is a whole hospital issue, it is the A&E staff who will have most experience and training in this area. A&E consultant job descriptions should include a role in major incident planning. Much of this responsibility can and must be delegated to individual hospital departments who will each have a part to play in execution of their part in the plan. However, someone needs to be managerially responsible for the production, testing, and review of the overall plan.

Plan production and maintenance

In this series we have created a major incident for St Jude's. Some of you may feel this scenario is a little unreal or far fetched but if the history of major incidents has taught us anything it is that anything is possible. Lists of especially dangerous sites are available under CIMA and COMAH legislation. Airports have a specific requirement to practise their major incident procedures, however the commonest major incidents will arise from train crashes, bus crashes, or large motorway incidents. Unfortunately it is impossible to guess the type of major incident that *you* will have manage and so plans have to be flexible enough to respond to other less predictable scenarios such as an infectious disease outbreak or something going wrong at a large public event.

It would be unusual to have to create a major incident plan from scratch. However, it may be that you inherit a plan that is so out of date or local circumstances have changed so dramatically that re-creation rather than review is the appropriate response. More commonly the need is to regularly update an existing plan to ensure it will function correctly when necessary.

A major incident plan should be reviewed at least annually and all members of staff should feel able to contribute any ideas to such a process.² Hospitals are constantly evolving, with specialties moved from site to site, wards being redesignated, and phone systems changing. All of these events will have an impact on the plan. Outside of the hospital new "threats" will appear and old ones may disappear. The closing of an old steel works may bring temporary relief until the plans for the local airport to be built on that site are approved.

Learning from the experiences of others could help in review of the major incident plan. High profile incidents are sometimes reported in the medical literature but most events go unreported medically. Most of us will look at such reports and apply the events to our local situation, assessing how we would respond. It has been suggested that central reporting of major incidents might be useful in the review of major incident plans.¹ This would include the production of casualty profiles,⁴ which individuals could then apply to their own plans and assess their ability to cope with such scenarios.

Scenarios of particular concern that have been identified are those involving significant numbers of children⁵ and where chemical decontamination is required.⁶ It would be wise for those involved in major incident planning to re-examine suggested guidance on such issues.⁷⁻¹⁰

The hospital plan should be a brief summary, outlining key actions and crucial aspects of the plan such as the communications cascade, the areas designated as the acute receiving ward, the minor injury areas, relatives base. The "command and control" functions should be clearly described. This should be backed up by detailed individual plans for each acute specialty and the support specialties.

There should be individual "action cards" for all posts that are involved in delivering the hospital's emergency response. These have to be kept up to date.

Communications failures are a recurrent theme in major incidents. These must be regularly updated and procedures practised. Lists should be available to confirm that key personnel have been called, their response, and estimated times of arrival.

After each review the plan needs to be signed off by the lead clinician but it should also be approved by the chief executive and the Trust Board.

As we have already seen at St Jude's updating guidelines can be a tricky business.¹¹ You must ensure that all old copies of the major incident plan are recalled and replaced in a quick and efficient manner. The chaos that could result from two major incident plans running alongside each other is obvious. A system of numbering all copies of a plan and recording who or where they are distributed to allows for easier recall. Ensuring that those who should have read and understood the plan have done so is another difficult task.¹² How many of the senior staff (medical, nursing, support, and administrative) in your own department, let alone the hospital, have read the latest version of the hospital's major incident plan? How do you convince rotating senior medical staff that they should read something it is unlikely they will ever have to use?

Training and audit

Training and audit have been identified as areas lacking from the majority of major incident plans at most hospitals.^{5, 12} Frequent, regular full scale testing of the major incident plan is unfeasible but a full scale test, even if planned for a quiet period, should be possible on a 10 or even 5 yearly cycle. If full scale testing is not possible then the testing of individual components of the plan certainly can be.¹² Staff call out cascades are a good example and may give worrying results, especially when there has been a high turnover of staff. The management call out cascade is often revealing and may provide information that can be used with great effect by those wise enough to see it! Communications testing is valuable but it is not the same as testing the major incident plan, so other parts of the response need testing. Table top exercises are a good way of involving staff in the process. To do this you need a large map of the A&E department with a well prepared scenario with markers representing patients being moved around the board to simulate patient flows. However, there is a real need to practise procedures "for real". Clearing the A&E department in preparation for receiving casualties may be inconvenient to patients and staff but could save lives in the future.

A major incident occurs suddenly, puts the whole system under immense pressure, and often does not run smoothly. The armed forces practise their procedures for catastrophic events time and time again. The response to a major incident is the nearest that our departments will get to a combat situation (hopefully) and staff have to react quickly and efficiently. Application of the basic principles of the plan should be an automatic response by senior A&E staff. This will not happen if plans are not practised.

Internal disaster plan

The incident at St Jude's was designed as an example of an important point in major incident planning. Disasters do not just happen outside of hospitals.¹³ It is amazing that internal hospital events are not more frequent. Volatile chemicals, explosive gasses, biochemical hazards, radioactive materials, and hundreds of members of the public all crammed into a high rise building, it is a disaster waiting to happen. Most plans will identify the A&E department as the entry point for all casualties but what happens if the A&E department is not there or becomes unusable because of contamination? Where do you send the ventilated survivors of the explosion on ITU? The possibility of using an alternative site for certain key areas in the plan should be discussed.

The major incident at St Jude's would be a challenge for any A&E department and hopefully raises some questions about major incident planning. No plan is perfect and mistakes occur¹⁴ but with sound preparation and a willingness to learn from others an appropriate response should be achievable by all hospitals.

LEADERSHIP

"Some are born great, some achieve greatness and some have greatness thrust upon them".¹⁵ This succinctly states how

Box 1 How would your department respond?

- How would your department cope with an internal disaster?
- Have you audited the last time senior members of staff read the major incident plan?
- Which parts of your hospital's plan have you been involved in testing?
- How quickly can you get 100 litres of intravenous fluid or five cyanide poisoning kits?
- What would happen if a "normal" patient suffered during the testing of a major incident plan?

people become leaders. Volumes have been written on the subject, each trying to find the magic formula that makes a leader. There can be no single set of characteristics that will guarantee good leadership. The leadership qualities required in situations of extreme adversity such as a war will be very different to those needed in a time of stability and prosperity. A&E work requires leadership in many different situations and thus the A&E manager needs to be aware of the types of leadership roles that they may have to adopt.

We recommend the review by Grint¹⁶ as an up to date treatise on the subject.

Theories of leadership

If asked to name some great leaders probably many would name Churchill, Mandela, Kennedy, or even Hitler. These might be all labelled as having "charisma", the elusive mixture of character traits that sets the person aside as a "natural leader". However, they all had "greatness thrust upon them" in that they had to respond to the situation of their "followers". They all had clear vision, even if that vision was totally corrupt in Hitler. They all were stubborn in the pursuit of that vision. Hitler was ruthless through his close henchmen, Mandela through personal sacrifice. They were all orators, some having a true gift of language, but mostly this was because they were telling their followers what they wanted to hear.

Yet these "traits" or "personality" or "charisma" when put into different political situations may have had opposite effects.

The situation in the NHS might feel like a war zone but from a historical perspective the NHS is a large and very stable business. The majority of leaders in the NHS need to develop different attributes from high profile charisma. Quiet and methodical work with coaching and encouraging attitude to colleagues seems to be the most respected model. A recent survey of NHS managers¹⁷ showed the most important leadership qualities were "genuine concern for others". Box 2 lists the other attributes that were found to be important in the survey.

Effective leaders in healthcare organisations are mentors rather than directors, democratic rather than autocratic. An

Box 2 "Evidence based" perceptions of qualities of a good leader in the NHS

- Genuine concern for others
- Inspirational communicator/networker/achiever
- Empowering others to lead
- Transparency
- Accessibility/approachability/flexibility
- Ability to draw people together with shared vision
- Encourages challenges to the current state
- Supports development culture
- Ability to analyse and think creatively
- Managing change sensitively

interesting new theory is that of the leader as a *servant*.¹⁷ This is a very ancient idea with clear examples of leaders as servants in many religions. It seems this principle has been rediscovered by modern management academics.

Leadership in A&E

The many facets of leadership can be examined by looking at some of the common leadership situations in A&E. Look at the matrix in table 1. This attempts to list the most important facets of leadership in some of the diverse situations found in an A&E manager's work. One might expect that the high profile leadership role of a difficult multiple resuscitation would require very different leadership qualities to chairing a departmental working meeting. However, when you analyse the skills that are being used, the lists are almost identical. Some skills may be more important than others but mainly it is in "style" that the main differences can be found.

In the resuscitation situation the leader is very much in command. All of the team will know their roles from the fairly didactic training of resuscitation courses. The leader has to quickly assess the problem, work out a plan of management, and then give clear orders to the rest of the team. The leader will listen to information and suggestions from the team but most of the direction and orders come from the leader. This situation is very like a small military unit. Here the needs of the individual staff members are of low immediate priority while the key objective of saving the patient's life is paramount. Ability to analyse, think creatively, and decisiveness are key attributes. Team management is by "order".

Running the "shop floor" during busy periods is a very different skill. The problems are the quantity of work, shortage of space and staff, and lack of throughput into hospital beds. Information gathering is the first task. Where are the rate limiting steps? What is the biggest problem? How might staff be best deployed? This is often a joint exercise with the senior nursing staff. Often the solutions are not clear cut and are often beyond the resources of the A&E department. The process of motivating staff needs first class negotiating skills, both within the A&E department and in the rest of the hospital. It

Table 1 An attempt has been made to rank the importance of roles and leadership tasks in different A&E situations. This list is only one view. Repeat the exercise. How would you rank the skills

Difficult resuscitation	Shop floor	Department lead
Decisiveness	Staff motivation	Communication/networking
Knowledge/skills	Analysis/creative thinking	Delegation
Analysis/creative thinking	Delegation	Encouraging others to lead
Delegation	Communication/networking	Analysis/creative thinking
Communication/networking	Flexibility	Staff motivation
Flexibility	Knowledge/skills	Decisiveness
Encouraging others to lead	Decisiveness	Flexibility
Staff motivation	Encouraging others to lead	Knowledge/skills

is only when these “background” actions are completed that it is sensible to throw yourself into the “front line” and start working through the backlog. Team management is by “requesting” and “asking”.

Departmental leadership is much more a “long game” than the other two crisis management situations. It is about developing and moulding a team. It is a much softer and more nurturing role. At times the more direct style of the resuscitation room is needed but in general softer motivational and communication led approaches will be more likely to get results. Team management by “guided consensus”.

The striking findings in table 1 are the similarities of the skills needed in each of these area of work. It is not a question of completely different skills being required but rather the style in which these skills are practised.

Even in the resuscitation room the style will vary according to the situation. In a “routine” resuscitation case the leader may take a very developmental role and let a junior member of the team lead while they take the part of one of the “team players”. As the case becomes increasingly complex, the style changes. A resuscitation room with three of four unstable multiply injured patients is major test of leadership skills. Orders have to be given and obeyed. A huge amount of data needs to be elicited, sorted, and clear decisions made. Staff have to be monitored and if not coping with a particular role they need urgent support or that task carried out in another way.

Box 3 Leadership styles in different A&E situations

Difficult resuscitation—Command and control
Hectic “shop floor”—Negotiate and motivate
Departmental manager—Guided consensus

Summary

Leadership is a complex task requiring many skills. A&E perhaps more than any other field of medicine puts us in critical leadership positions almost every working day. Learning and practising these skills will make us better A&E clinicians but also give us a great head start in leadership roles in management.

SERIES SUMMARY

The objectives of the series were to cover the current syllabus for management topics listed in the curriculum of the Faculty of A&E Medicine and to give some insight into management theory that lies behind the practical aspects of management. Table 2 lists the management topics listed in the Faculty curriculum¹⁸ and the references for the articles containing information and tasks on these subjects. This should act as a series index for those wishing to revise these topics. Box 4 lists some general management theory that is not in the curriculum for the FFAEM but gives a background to management practice. A full index to the series is available on emjonline.

Just as going on a resuscitation course will not make you competent in resuscitation, so reading this series or going on a management course will not make you a competent manager. For those trainees with little management experience, you will need supervised management practice. Those readers who are established managers we hope that the series has stimulated some thoughts on how your practice might be improved.

The series set out to be interactive and to make management teaching “come alive” by giving “real situations” for the reader to practise and handle. Part of this objective was to encourage feedback by the internet. A few brave souls have sent replies to some of the tasks and have been credited with

Box 4 General management theory covered in SIMS

- Development of strategy—T2, 3e
- Strategic decision making/option appraisal—T3, T5
- Team structure—T4
- Motivational theory—T5
- Change management, T9

external CPD credits. However, this response has been minimal. Why? We would like feedback on how interaction might have been made easier.

We are aware that a number of areas of management remain untouched. The question is will St Jude’s ever rise from the ashes? Perhaps it will, under new management!

The final “St Jude’s diary” is available on line; find out the fate of our characters after the major incident.

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Disclaimer

Most of the characters and situations in this series are entirely fictional and any resemblance to any person or institution are entirely coincidental. A few situations are based on real life but all names have been changed.

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Box 5 List of the management subjects in the curriculum for the examination for Faculty of A&E medicine giving the references where these are covered in SIMS. The numbers indicate the SIMS article, the suffix "e" indicates the information is in the internet section, "T" indicates the subject has been covered in detail in a "time out section" of the paper journal

Organisation and administration of the A&E service	1, 1e, 3e, 4T , 4e, 8e, 10e, T11 .
Clinical audit and risk management	1e, T8 .
Educational development of all staff	1e, 2e, 3e, 7e, 8e, T9
Health education	
Accident prevention	
Organisational issues and quality standards	1e, T4 .
Manpower and skill mix	1e, T4
Patient dignity and privacy	7e, T8, 8e
Ethical issues and confidentiality	4e, 6, 7e, T8, 8e
Major incident planning/procedures/practice	11, 11e, T12
Common Law and confidentiality	6
Children Act	8, 9e, T10
Mental Health Act	4e
Health and Safety at Work Act	
Road Traffic Act	
Data Protection Act	
Access to Health Records Act	
Patients' Charter (NHS plan)	5e, T4
NHS and Community Care Act	
Role of the coroner	9e, T11
Organ/tissue donation	
Hospital Complaint Procedure Act	see complaints
Equal opportunities	see staff management
Department policies/procedures	4e, 5e, T6, 7e, T2, 9e, T10
Staff management (manpower/personnel procedures)	1e, T2, 2e, 3e, 4e, 6e, T6, 7e, 8
Equipment (choosing to ordering)	4e, 5e, 6e
Resource management/clinical budgeting	1e, T7, T9
Contracting/standards setting	1e, 3e, T4
Information technology	Using the internet
Clinical audit/quality monitoring	1e, 4e, T8
Compliments/complaints	1e, 2e, 3e, T3, 4e, 5e, 9e, T10
Medicolegal statements	3e, 4e, 5e, 6e, 7e
Committee work	8e, T9
Liaising with other agencies	2e, 4e, 5, 5e, 6e
Public relations/media	6e, 7, 9e, T10, 10e
Major incident planning/exercises	11, T12
Leadership	T12
Reliability	
Teamwork	T4, T5

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