

to take annual leave together. The inevitable stress that this will put on their relationship will also have effects on the department.

One may be approached by doctors who need the opportunity to re-establish themselves in medicine. One must be practical and stay within the confines of being fair, but be prepared to give someone the break they need. At worst you will only have to put up with them for six months. You may wish to appoint them subject to

conditions. For example, a doctor who had been out of clinical medicine for 18 years was appointed subject to doing clinical attachments in medicine and A&E first, and a rehabilitated alcoholic subject to remaining under supervision for his problem. Both did the job competently.

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Risk management

Risk management is a tool which, in the health service, embraces management of the untoward events which have costs. The main problems and costs are legal, but risk management covers all untoward events. If a patient suffers from mistreatment, the cost is far higher than the cost of legal fees and any settlement. Even if there is no negligence, medical complications have to be treated and the investigation of complaints takes clinical and managerial time. Staff attending court have to be replaced and the hospital's reputation may suffer more than its finances.

A&E staff will mainly be involved in risk management in relation to negligence and other claims relating to clinical practice—clinical risk management. I dislike this term; it is negative and implies that our aim should be to avoid complaints and legal action. As clinicians, we should try to provide the best possible patient care (or the best that can be achieved with available resources) because our patients deserve nothing less, not just because we do not want to be sued. I prefer the concept of "total quality management"^{1,2} which seeks to make continuing improvements to a system even if it is already excellent. Total quality management and risk management have different aims but the results should be similar and both should lead to improved patient care. Doctors should be involved in both.

For the practitioner, the only secret of avoiding risk is to be a good doctor: one must keep up to date but thereafter risks are created or avoided one patient at a time.³ It is essential to act professionally and build up a relationship with every patient. Do not take shortcuts in the history, examination, or record keeping. Radiographs must be interpreted with care and one should know the limits of one's competence. Finally, ensure that the patient understands the diagnosis and treatment and that one communicates properly to any other health care professional involved (for example, general practitioner, nurse).

Doctors with managerial responsibilities need a wider view. I devote most of my article to clinical risk management but clinical directors of A&E are responsible (with the help of other departments, such as occupational health and personnel) for what happens within their department and may be involved in risk management in other ways, for example:

- Non-clinical problems relating to patients (a fall from a trolley, loss of valuables..)
- Injury to visitors (slipping on a wet floor..)
- Injury to staff (back injury in nurses, needlestick injury, violence..)
- Contravention of employment legislation (unfair dismissal, sexual or racial discrimination..)
- Contravention of other legislation (health and safety, data protection..)
- Physical damage to the department (fire, theft..)

– Damage to the organisation of the department (the computer crashes with the loss of all records..)

There are four stages in risk management, as follows.^{4,5}

1 Identification of risk

This is done by asking the question "What can go wrong?". A&E departments see such a wide range of problems that they are a medicolegal minefield. The answer to "what can go wrong?" is anything and everything, but the main causes for complaint and legal action are the following.

Misdiagnosis—The commonest misdiagnoses in A&E are injuries missed on x ray but these are usually picked up by the radiologist and may not have major ill effects. Injuries missed because of failure to x ray the appropriate part may take longer to come to light and have more serious consequences. Poor clinical skills lead to missing tendon, nerve, and ligamentous injuries, compartment syndrome, and so on. Non-trauma misdiagnoses such as myocardial infarction, subarachnoid haemorrhage, testicular torsion, and meningitis are less common but may have more serious repercussions.

Failure to admit—Although this may be secondary to failure to diagnose, the failure to admit may be the primary cause of complaint (for example, head injury or social problems complicating an injury). The self harm patient who is discharged and later commits suicide is another example.

Drug problems such as interactions and problems caused by failure to ask about allergies or past medical history.

Mismanagement, for example failure to manipulate a fracture, failure to recognise an inadequate reduction, incorrect treatment or failure to organise follow up. Doctors making decisions or doing procedures beyond their competence is a particular problem.

Damage to patients, for example a cut by plaster saw, leaving on a tourniquet.

In addition, there are problems which affect all doctors such as consent, anaesthesia, and minor operations. A recently described risk is that of giving telephone advice. An A&E department must not only learn from its own mistakes but also from the mistakes of others. Keep up to date with the A&E literature on difficult diagnoses, complaints,⁶ and other medicolegal problems.

The question "what can go wrong?" must not be limited to errors. It is important to consider why patients complain, as only a small minority of errors result in a complaint, and many complaints are made when there has been no error. The major problem is a breakdown in communication. Patients accept that doctors are not omnipotent but they do expect them to act in a professional way and to explain things. Too often the real reason for complaint is the perception that the doctor did not care or was rude.

Frequently, complaints are not the result of a single major error or uncaring member of staff but follow a series of minor problems. A patient with a wrist injury is greeted by an abrupt receptionist and then waits three hours before being seen by an inexperienced doctor who is dressed in a slovenly way, perceived as unprofessional. The quality of the *x* rays is not optimal. A different SHO misses an undisplaced fracture and discharges the patient without giving advice or prescribing analgesia. The films are reported three days later but the report takes a further two days to reach the consultant's desk. The patient is asked to reattend but has to wait a further hour as the *x* rays cannot be located. The wrist is plastered but the orthopaedic surgeon in fracture clinic feels that the position of the wrist could be improved and the plaster is changed. Finally the patient develops a reflex sympathetic dystrophy. The complication is unlikely to be due to any error but a complaint should not be unexpected. Blaming the doctor who missed the fracture or the nurse who applied the plaster is inappropriate: systems may cause risk.

2 Risk analysis

Having identified a potential problem, it should be analysed to determine how often it is likely to happen, how severe the effects might be and what it is likely to cost. Ideally this analysis should be based on evidence. The frequency of the commoner problems is determined by monitoring untoward events in the department. All diagnostic errors should be audited, as should complaints, untoward incident forms, and accidents occurring within the department. This detects problems once they have arisen: it is important also to try to detect the potential for future problems. Mismanagement is difficult to define but every senior doctor has seen patients given the wrong antibiotic and knows overconfident SHOs who have got into difficulty by not asking advice. Usually no harm results but these episodes should be considered as "near misses", indicating events which might have a less good outcome next time. These should be monitored. In a large department such errors may come to the attention of any one of several senior doctors and so they should all be notified to one person for collation. Medical audit may also demonstrate areas of concern and it is useful to develop good working relationships with colleagues in other specialties to try to obtain feedback on the patients referred to specialist firms.

It may be possible to calculate risks. The incidence of alert patients attending A&E with a skull fracture is 110 per million per year⁷ but 30% of skull fractures may be missed.⁸ A department serving a population of 250 000 can expect to miss nine skull fractures a year. In itself, the effect of missing a linear skull fracture is minimal but there is an approximately 3% chance of an alert adult with a skull fracture developing an intracranial haematoma.⁷ The effect of this will depend on a variety of factors including whether the patient is in hospital, the speed of onset of deterioration, and how quickly the carers respond. In a department the size of mine there will, on average, be one extradural haematoma associated with a missed fracture every four years. Perhaps half may occur in inpatients or may be responded to rapidly, and so once every eight years one can expect a missed extradural with serious consequences (but not every one will be associated with a complaint). Potential costs can be worked out by the hospital's solicitors in conjunction with a doctor's advice on the consequences of an error.

The analysis of missed skull fractures is given as an example but it is impractical to do a detailed analysis on every potential problem and for many, the data on which to base an analysis do not exist. Most analyses can be done by

educated guesswork. Thus it is sufficient to know that missed minor greenstick fractures are common but have few serious consequences (though that may not prevent complaints and bad publicity), whereas a missed meningitis is uncommon but will be fatal or leave a patient severely disabled.

3 Risk control

The aim of identifying and analysing risks is to control them. Ideally risks should be eliminated but if that is not possible they can be avoided or made less likely. Finally, if they still occur, they can be made cheaper.

Total quality management stresses that most employees are well motivated and try hard: most problems are the fault of the system and not the workers.¹ A system should be designed with a view to quality. It should be monitored to confirm that quality is being provided and to give a yardstick against which further improvements can be measured. Trying to achieve quality in a poor system by constant checks and monitoring, however, is wasteful and ineffective. A&E, by its very nature of shift work and the wide range of patients seen, often in the earliest stages of their illness and frequently under the influence of alcohol, can never be risk-free, but the UK system appears to have been set up to minimise quality and maximise risk! In most A&E departments the majority of patients are seen by SHOs, often in their first postregistration job and poorly supervised outside normal working hours. There will be a day's introductory course and then "in at the deep end". Formal teaching is difficult to organise because of shift work, but consists of daily tutorials for the first two weeks and weekly sessions for six months, after which the, now more experienced, doctors are replaced with another set of inexperienced ones. This would not be allowed in anaesthetics. If a doctor is sick, work cannot be cancelled and so locums (who may also be inexperienced) need to be found at short notice. Add to this frequent queues tempting a doctor to take short cuts, and bed shortages leading to pressure to keep patients out of hospital and it is surprising that we do not get more disasters. I do not wish to deny the enormous improvements made over the past 15 years but real risk control in A&E can only result from rethinking the way the service is provided, basing it on patient needs rather than tradition and the profession's training needs.

This is a long term aim. At present we can only make improvements to the system we have. Some of the obvious procedures to minimise errors which have been introduced in many departments are:

- Better teaching earlier in an SHO's post
- Guidelines and protocols including when to refer or seek senior help
- Trauma teams
- Use of check lists/proformas
- Replacing some SHOs by more experienced middle grade staff
- Senior cover in the department for as many of the 24 hours as resources will allow
- Hot reporting of *x* rays, training radiographers in *x* ray interpretation.

If diagnostic and management errors can be detected early, some of their ill effects may be prevented. Methods of detecting problems at an early stage include:

- Next day *x* ray reporting or daily review of all *x* rays by a senior A&E doctor
- All patients unplanned returns to A&E unexpectedly to be seen by a senior doctor

- Automatic referral of certain categories of patients (for example, *all* hand injuries) to a follow up clinic.

As noted, it is often not an error that leads a patient to complain. The department may project a poor image before the patient meets the triage nurse: adequate car parking and comfortable chairs in the waiting room will ensure that a patient starts off happy. Patients must be made to feel as if they are valued. All grades of staff will benefit from "customer care" training: those who object to such training probably need it most of all!

Standards are set from the top. Clinical excellence, hard work, and correct attitudes to patients will only occur if staff morale is high and if consultants and senior nurses set a good example.

Improvements must be paid for. It is easy to design a minimal risk A&E department (most patients seen by fully trained doctors with trainees having six weeks of formal training before starting to work independently and even then being constantly supervised; short shifts; 24 hour hot reporting of *x* rays by consultant radiologists; staffing at a level to avoid queues; and so on) but even if the manpower existed, the cost would be prohibitive. Some risk control measures can be introduced at minimal cost and others might be insisted on by outside agencies (for example, following a Royal College inspection) but most will need to be negotiated with management or purchasers on a cost-benefit basis. Funds are limited and so it is important to prioritise improvements using risk analysis. Discussion is needed to decide whether to concentrate on the most serious problem, the commonest, or the most costly. There may be other pressures for improvement. Thus the Community Health Council may support physical alterations to the department or general practitioners might support the reassurance of *x* rays being reported seven days a week.

Good record keeping will, in itself, reduce the number of errors made and in the event of an error is the best protection against an allegation of negligence. Notes made at the time are assumed to represent what happened. An extradural haematoma developing in a patient sent home after a head injury may be very costly if the notes read "SXR—NBI, discharge" but may be defensible if they read "Staying with parents, head injury instructions explained to patient and parents, advice sheet given, return immediately if concerned."

If a serious problem does occur it is important to find out exactly what happened by speaking to everyone

concerned. Legal cases may occur years after the event, by which time staff have moved on and memories have faded, and so written statements should be obtained while events are still fresh in their memory. (If a legal action is almost certain, it may be better for these statements to be obtained by the Trust's solicitors, as communication between solicitor and client is privileged and cannot be disclosed, whereas the results of hospital inquiries can be subpoenaed.)

Often, the complaining patient is not looking for payment but an explanation, an apology, and a reassurance that systems have been changed to prevent similar problems happening to others. If this does not happen, a simple complaint can escalate with involvement of lawyers or the press. Costs can be reduced by correct and speedy handling of complaints.

4 Risk funding

The risk-free A&E department does not exist and every department will have some claims against it during the course of a year. These need to be paid for. Frequent small claims might be paid from a hospital contingency fund or even from the department budget (which should give extra incentive to improve standards). However some claims (for example, a breadwinner rendered tetraplegic) would be too costly to pay for in this way. A&E staff are unlikely to be involved as decisions on funding risk and insurance will be made at highest management level.

In conclusion, it is essential for doctors to keep up to date and take care over every patient contact, but risk reduction will only occur by looking at the organisation of the department.

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