

FOR DEBATE

Accident and emergency 24 hour senior cover—a necessity or a luxury?

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For many years the NHS has survived with most emergency care being delivered by junior doctors, who may discuss recognised problems with their consultants. Studies have suggested that more patients would have survived had senior intervention occurred earlier.^{1,2} Numbers attending accident and emergency (A&E) departments are increasing, and some departments have noticed a change in diurnal variation. At City Hospital in Birmingham, a quarter of ambulance alert calls occur between midnight and 6 am. Larger inner city departments are therefore increasing their cover both by specialist registrars and by A&E consultants.

This debate is undertaken by A&E doctors who all have experience of working in both a 24 hour resident system and other limited on call systems.

The case for 24 hour cover

A&E medicine provides a 24 hour service. Emergencies presenting in the middle of the night deserve the same level of care as patients attending during office hours. We believe there should be a senior doctor present in the department 24 hours a day.

The clinical benefits of a senior doctor within the A&E department should be evident, otherwise what is the benefit of specialist training? We train to lead a team in trauma and medical emergencies. These events may be less frequent in the middle of the night but when they do occur it is usually the most junior hospital doctors who are left to deal with the case before on call seniors can arrive from home.

There is evidence from A&E and other specialties about the benefit of senior input in patient management. Redmond and Buxton found that consultants seeing patients at triage reduced the departmental workload.³ Consultant and senior surgeons reviewing surgical patients before admission significantly decreased admission rates and decreased the number of diagnostic tests used.⁴ Senior registrars rather than senior house officers (SHOs) seeing medical emergencies increased the same day discharge rates from 3.6% to 15%, and also reduced the 28 day readmission rate.⁵ Vocationally trained general practitioners in A&E treating "primary care attenders" request fewer x rays and refer fewer patients than A&E SHOs,⁶ with resulting reduction in cost of care of each case.⁷ In-house trauma surgeons in a level 1

trauma centre in Cincinnati, Ohio, USA, reduced the time to completion of diagnostic tests and therapeutic intervention compared with doctors on call from home or their clinics.⁸

We suggest that the presence of a senior A&E doctor enables emergency care to be managed more swiftly and efficiently, with earlier and more exact interventions, less use of diagnostic tests, fewer referrals to other teams, and fewer admissions. On the spot advice also reduces the need for returns to clinics. At City Hospital, a reduction in return rate from 15% to under 5% has been achieved in this way. The availability of advice from a senior at home is not equivalent to that of someone face to face with the senior house officer and patient on the shop floor. A junior doctor will not telephone a senior at home about a "minor case," whereas he would be prepared to ask the senior who is on the shop floor. These "minor cases" make up the majority of A&E work and if incorrectly managed can have serious consequences. It is hoped that vocationally trained A&E doctors would show the same improved use of resources over junior doctors in all patient groups attending A&E.⁹

The presence of a senior doctor out of hours has several management advantages. A&E seniors can direct the SHOs while senior nurses direct their nurses. Crisis management, whether it be over beds, waiting times, staffing, or clinical problems, can be recognised and dealt with at a far earlier stage. Information given to patients and relatives is likely to be more accurate. All aspects of communication are improved. Complaints can often be defused by a senior at an early stage. This may have far reaching consequences in financial and public image stakes. The public expect the best for themselves and their relatives. When this does not occur, they complain. Having senior doctors 24 hours a day must improve the quality of care and the image of that NHS trust and the NHS as a whole. Can any doctor fully comprehend specific clinical and management problems if they only see the problems of daytime A&E?

Junior doctors learn most from their "on the shop floor" experience. Night shifts can be a daunting experience. They have to deal with violent and inebriated patients who are impossible to examine in the textbook manner, and treat seriously unwell adults and children. Senior nurses are often approached for advice since they have a wealth of experience.

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However, the ultimate responsibility for care lies with the doctor. Senior doctors working alongside juniors at night can teach juniors methods of dealing with a different case mix of patients to those seen during the day. This avoids juniors having to obtain advice from other equally inexperienced colleagues. SHOs from other specialties also gain enormously from the advice of A&E seniors, improving relationships with other directorates. Continuous teaching of the nurses improves standards in the department, particularly if there is a set of nurses regularly missing out on daytime teaching. Porters and clerical staff, who often only work nights, feel more valued as part of the team if they work alongside senior doctors.

In our experience SHOs choose to work in A&E departments with 24 hour senior cover because of the increased support and teaching. This allows these departments to benefit from high calibre SHOs.

Working as a senior in a department with 24 hour cover is often wrongly seen as unduly onerous and is unfairly criticised within A&E circles. A carefully planned shift system has many advantages at home and at work. Working hours are often significantly less. Meetings and daytime teaching commitments can be arranged without any fear of interruption from the shopfloor. Increased free time including weekdays off enhances personal and family life.

The emphasis on senior clinician led medicine is being encouraged in all specialties. Increasing numbers of doctors are being trained in A&E medicine. We believe 24 hour senior cover is the way forward for the specialty.

The case against

Although there has been a steady increase in the overall number of new attendances at A&E departments over the past 15 years, there has been no corresponding change in the numbers of major cases. Since 1990 the incidence of major trauma has been steady and most occurs during the hours between 8.00 am and midnight. The comparatively small number of major cases presenting after midnight can be managed by an appropriately trained team, for example a trauma team or an "arrest" team. Evidence from the Medical Care Research Unit¹⁰ suggests that the survival rate, in major trauma cases, is the same whether resuscitation is led by an ATLS trained team or a senior A&E doctor

As with major cases, the overall attendance rate falls off after midnight.¹¹ However, in most departments there will have been a build up of patients in the late evening, leading to long waiting times. The senior A&E doctor then becomes an "extra pair of hands," working as an SHO. While it is accepted that in exceptional circumstances consultants become involved in reducing waiting times, BAEM recommends that they are not rostered for such duties.¹² By having 24 hour senior cover that is what inevitably happens. This is seen by some as an easier option than increasing the levels of junior and middle grade staff. There may even

be financial benefit to the trusts, in that by using the goodwill of the consultants they avoid employing more SHOs.

Should a department wish to develop a 24 hour consultant led service, there must be sufficient numbers to make it feasible. In the current climate of financial constraints and in the light of recruitment difficulties, it is unlikely that any department in the country will satisfy these requirements. Various estimates have been made on the number required for a 24 hour rota. In personnel circles it is said that six people are needed for one post to be covered 24 hours per day, when leave and other absences are taken in to account. Most consultants spend six of their 10 sessions per week on clinical duties. Therefore to cover a 24 hour clinical service would require 10 WTE (whole time equivalent) consultants. To try to run such a system on fewer numbers puts too much strain on those working it. This leads to problems of morale and ill health and ultimately the department suffers.

Among the casualties of an understaffed 24 hour system is the non-clinical work of the consultant. An important part of the consultant role is management and administration. Because the non-clinical hospital staff work traditional "office hours," it may not be possible to go to meetings except during time off in lieu of working unsociable hours. Working late or night shifts distances consultants from their colleagues, not only in the hospital as a whole, but even within the department itself. It becomes increasingly difficult to get together and discuss the running of the department. It is even more difficult with regard to forward planning and future development of the service. There are also fewer opportunities for the informal contacts with other specialties that so many of us find useful. This can lead to further isolation of the A&E department.

Training and education are an important consultant role. The time available for preparation and presentation of lectures is limited by the demands of the full shift system. Lectures, tutorials, and courses are usually held during normal working hours. As a result, it is likely that someone will have to work, either the night before or after these events, if there is insufficient staff to cover the department. The effect of this will be that either the department or the teaching, and possibly both, will suffer. It may be argued that 24 hour senior cover allows for more "shop floor" teaching. However, we doubt if much is absorbed at night. Moreover, in one respect the presence of senior cover on the "shop floor" at all times may be detrimental to the development of the SHOs. We have found that they develop an over-reliance on the senior staff and are reluctant to make independent decisions. Obviously they need appropriate training and supervision, but taking their own decisions is an important step in their development. There are also circumstances where an alternate source of advice is ignored. We are referring here to the experienced A&E nurse whose expertise is neglected in favour of that of the senior doctor.

Consultants have a vital role in training of specialist registrars. Just as a shift system can decrease contact with consultant colleagues, it may also reduce contact with trainees. It is vital that a full shift system ensures adequate protected teaching time and supervised practice. The trainee in the latter half of his training must also have time when he is in charge; we are all aware that decision making is far more difficult when the "buck stops here." Departments with only one consultant often develop excellent quality control and risk management systems to compensate for the recognised flaws in the service. For example, in many single handed departments the consultant reviews the cards of all those presenting when he is absent. This may detect more potential problems than the resident senior doctor who is in the department but not fully aware of every case. Good quality control measures may be ignored because of the false sense of security engendered by the resident doctor.

Finally—and arguably most importantly—is the impact of the 24 hour cover on the doctors themselves. Working shifts can be onerous, and there are few other professional groups undertaking such work. Working hours may be less but are hours spent with the family increased? Is the consultant at home but asleep at weekends or is he at home only when the children are at school? Meetings with those working office hours will often eat into free time. It has been suggested from the USA that there is a high incidence of "burnout" in emergency room physicians, which is higher in those covering the most night shifts.¹³ It has been shown that blood pressure is significantly higher while working in the emergency room.¹⁴ Along with the human consequences of work induced illness, there is the financial cost of replacing a highly trained doctor who still has much to offer. In an already stressful specialty, the additional demands of an arduous work pattern will prove too much to sustain over a long period of time. Twenty four hour cover can therefore only be sustained by the young consultant for a few years, so what then happens to the older consultants, unless the retirement age for A&E consultants is reduced?

Conclusions

Before deciding on whether 24 hour cover is appropriate, departments need to analyse their workload. A small overnight workload will not warrant senior cover. But critically ill patients will still occasionally arrive. Should they receive care from junior staff only? Is it more appropriate to close some departments at night and have a smaller number open but all providing consultant led care? Can we be helped by new technologies?

Some A&E departments are making attempts to provide 24 hour senior cover. Many of those have experienced problems. Although there may be good clinical reasons for supporting the provision of care by senior staff at all times, in reality this has not been supported by adequate resources. The hours worked by seniors and the work pattern must be realistic and

sustainable. Although many A&E consultants are young and enthusiastic at present, how will they feel about nights on call in their preretirement years? Only by a massive increase in numbers of consultants could this be achieved with the present number of A&E departments.

The Audit Commission has already suggested that there should be fewer A&E departments¹² and this would aid in achieving larger numbers of A&E consultants in each department. Alternatively A&E departments in close proximity could rotate in being open overnight, with only one consultant covering them. However, the public may be confused by such a system, not knowing where to go in an emergency. It is unlikely that trusts will agree that only another department will stay open at night, because of the fear that this is the first step to closure.

Could a consultant cover more than one department at night? It is difficult to imagine that a consultant covering a geographically separate unit is any better than a consultant covering his own department from home. With technological advances a distant consultant will be able to give advice having seen the patient over a video Internet link. Although it is likely that this will be better than a simple telephone conversation about a patient, will it be as good as actually examining the patient? If an emergency procedure is needed, can this be performed remotely? At present most A&E departments only get a few minutes warning of the arrival of critically ill patients. Early warning, with increased information including video transmission, may allow the consultant at home to arrive in A&E before the patient. However, this still does not address the person brought by his family. The case that ambulance crew and junior medical staff have underestimated can only be detected by the consultant within the department.

A&E is the only department receiving patients unannounced and so it could be argued that it is the only one requiring seniors instantly available. But this must not be an excuse for other specialties to decrease their night time commitment. There needs to be a change in attitude so that the NHS becomes a 24 hour system with A&E as part of that system. It is pointless providing an excellent front door service if the admitting specialties cannot continue that level of response.

Inevitably, the provision of emergency medicine will change in the future. Departments increasing their cover must be encouraged to undertake prospective research into the benefits, so that evidence can be accumulated on the best system of emergency care. We need evidence of outcome, efficiency, and cost-effectiveness before this debate can be concluded.

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