1.0 The Current Situation - Developments and Difficulties

The specialty of A&E medicine has developed rapidly in the United Kingdom and this progress has accelerated during the past five to ten years. There has been a sustained expansion in the number of departments which are now supervised by one or more consultants. The Association believes this has allowed a dramatic improvement in the quality of clinical care, the supervision and training of junior medical staff and all other aspects of the management of an A&E department.

There has been a similar rapid expansion in the number of specialist registrars (SpR) in training to become consultants in the specialty. There is every indication that A&E medicine is an increasingly attractive career option for young doctors.

The introduction of the staff grade and the development of the non-consultant career grade post have consolidated the ability of A&E departments to provide experienced medical cover, supervision and training.

However, the number of senior and middle grade medical staff remains inadequate to provide the continuity of cover required.

At present, the senior house officer (SHO) remains the principal source of patient care. There have been serious difficulties in the recruitment of SHOs in adequate numbers and of the necessary quality to fill the large number of posts available.

There are increasing pressures on A&E departments throughout the United Kingdom. The Audit Commission has identified a general increase in new patient attendances of 2% per annum in recent years and there is no indication that this trend is diminishing. This increased pressure from A&E patients has been compounded by the continuing rise in acute medical admissions for which there is often no hospital bed available. These two factors have combined to increase dramatically the volume of work and pressure on staff within A&E departments.

Recent years have also seen the expansion of the role and responsibilities of nursing staff within A&E departments. The advent of the emergency nurse practitioner has proved particularly successful in dealing with specific groups of patients although it has made a relatively minor impact on the overall workload in most departments. However, potential remains for maximising the contribution of emergency nurse practitioners in the future.

The ability of A&E departments to improve the quality of service provided is inevitably constrained by inadequate funding. At present, departments are usually funded on a block contract basis as there is, as yet, no widely available index of departmental activity. The recent development of the standard National Triage Scale should ensure objective and reproducible indices of activity particularly when combined with patient disposal and the forthcoming case-mix measures for A&E medicine.

The only available indicators of departmental activity are healthcare resource groups (HRGs) produced by the National Audit Office in conjunction with the Clinical Services Committee of the BAEM. Consistent definitions must underpin this and the initiative will require optimal IT provision and data definition. Until this information is available, it is probable that the funding of A&E departments will continue to be based on criteria which are outdated and unreliable.

There is a wider funding issue regarding A&E departments which represents the current tension within the National Health Service between emergency and elective work. The current priority setting for purchasers and Trusts is centred on contracting for specified elective targets and emergency work continues to be a secondary priority. The pressure of emergency activity would indicate that this current situation should change within the proposed reorganisation of the NHS.

Current debates within the specialty include the important but difficult question of the benefits of centralisation of services. For those departments where the provision of medical staffing at all levels is inadequate to deal with the patient load and where the hospital does not have the range of supporting specialties, the argument for centralisation of services seems attractive. However, the geographic and demographic characteristics of the United Kingdom suggest that a simple policy of closure and centralisation is not the answer.

2.0 A Core Clinical Service for A& E Medicine

2.1 BACKGROUND

Most A&E departments are facing an inexorable rise in new patient attendances. The national average increase is 2% per annum, although many centres have seen 5-10% rises in the last one or two years. The increased demand has not been matched by increased resources and the recruitment of medical staff has been a particular problem.

Faced with increasing demand and limited resources it is proper that A&E departments should seek to define their core activity to ensure that their limited resources are deployed in the most clinically appropriate and cost-effective way.

The BAEM defines the core A&E service as follows:

- The resuscitation, assessment and treatment of acute illness and injury in patients of all ages by appropriately trained and experienced staff, according to current national and local standards, and the onward referral of patients as appropriate. This service will be available continuously 24 hours a day and will be consultant led.

- A&E services will lead the clinical arrangements for dealing with a major incident.

- Patients presenting within the following categories would be included in the core service:

    - acute trauma, usually within two days of injury;
    - acute pain, unrelieved by simple analgesia;
    - acute illness;
    - acute respiratory distress;
    - acute change in mental status, including alteration of consciousness and acute confusional states;
    - patients brought to hospital by the police, normally excluding patients detained under section 136 of the *Mental Health Act*;
    - patients brought to hospital by emergency ambulance; and
    - patients appropriately referred by any other health care professional

- In addition, A&E departments may review patients for the reassessment and follow-up of defined conditions. The total number of planned reviews should not exceed 10% of all new patient attendances. The exact nature of review work to be undertaken should be negotiated locally. However this work would not normally include routine dressings or simple removal of sutures.

- Observation beds, within or immediately adjacent to the department, can provide a valuable area for monitoring and supervision of patients. However, such units must be funded to allow adequate medical and nurse staffing. Locally agreed arrangements must be in place to ensure that the facility is used appropriately and not misused, in particular by in-hospital admitting teams.

2.2 ASPECTS OF CARE OUTSIDE THE DEFINITION OF A CORE A&E SERVICE

Primary care attenders

The A&E service is not designed to provide care usually delivered in general practice. Patients outside the broad core service definitions should initially seek help from their general practitioner.

Patients who choose to attend the A&E department with such conditions should be redirected to the most appropriate source of health care or advised that they will have to wait until the more acutely ill patients have been seen.
The volume of patients needing primary care presenting to a particular department may justify the employment of general practitioners to meet this workload. This should be funded separately.

General practitioner referrals

It is recognised that the future will see increased co-operation and integration between the traditional emergency care roles in primary care and A&E. However, it is important to establish a baseline which reflects the current situation in most A&E departments. Developments over and above this baseline should be negotiated locally, and supported by appropriate structures and resources.

Current A&E services would not normally expect to:

- Provide assessment of non-acute problems or routine second opinions. These should be sought from the appropriate consultant.
- Be used to circumvent delay in obtaining out-patient appointments. Such attempts should be drawn to the attention of the GP and the specialty involved.
- Provide routine investigations, including blood tests, radiology and ECGs. Access to these investigations should be negotiated with the appropriate department.

The A&E department may review patients with a continuing, or unresolved problem which has already received A&E care. Such cases should be reviewed by a middle grade or more senior doctor.

Patients with acute trauma may be referred by their general practitioner, or practice nurse, after discussion with the A&E department with a referral letter. Referral by practice reception or administrative staff, or referral without a letter or prior discussion, should not occur.

Other referrals from general practitioners to A&E should be discussed by

telephone with the most senior doctor on duty in the department. This may result in advice to refer directly to an in-patient team.

Other services

It is recognised that many A&E departments perform additional functions, eg minor operations lists, hand surgery, head injury management and follow-up. These services lie outside the core definition of an A&E service. They should be subject to separate local negotiations and funded separately. It is inappropriate to provide such services within a core A&E contract.

3.0 Recommendations for the Future Configuration of A & E Services

No single pattern of service provision is appropriate for all parts of the United Kingdom. The BAEM recommends that the following models would be applicable in different settings within the United Kingdom:

- **Within the major urban metropolitan areas**

  Where there are difficulties in providing safe levels of medical and nursing staffing or inadequate support in a number of departments a short distance apart, centralisation of A&E resources should be considered. This would allow increased consultant and 24-hour middle grade presence within the department supported by all the necessary specialties, at appropriate levels of training and experience.

  In addition to providing a high level of clinical shop floor cover, the increased consultant and middle grade staffing would provide opportunities for excellent levels of supervision, training, teaching, research and audit.

- **Those hospitals with new patient attendances of greater than 30,000 per annum**

  Discussion concerning the organisation of service is occurring in other disciplines, not solely A&E medicine, and the future role of these institutions may be determined by the response to documents such as the *Provision of Acute General Hospital Services.*

  However, the principles for A&E departments in this type of hospital are as follows:

  - Where such departments are able to demonstrate their effectiveness, safety and quality, then the status quo should be supported.

- However, departments must have immediate access to the key supporting specialties to allow an A&E department to function safely. The following should be available on site: intensive care, anaesthetics, acute medicine, general surgery, orthopaedic trauma. There should be rapid easy access to child health, 24-hour access to imaging (including CT scanning) and laboratory services available on site. Where these supporting services are absent or withdrawn, the A&E service will not be recognised for training.

- The staffing of such departments is currently based around SHOs, but greater emphasis should be given to increased staffing with non-consultant career grade doctors under consultant supervision and maximising the role of emergency nurse practitioners.

- In these circumstances, such departments can provide high quality A&E care around the clock for any patient presenting to the department. For those patients requiring regional centre expertise, then safe stabilisation and transfer protocols must be in place.

- Such departments would be eligible for consideration for the allocation of training status for SpRs and SHOs. This would be facilitated by arranging rotations or shared teaching programmes with a regional centre.

These principles apply to such hospitals whether in metropolitan, urban or rural areas.

■ **The smaller district general hospitals, seeing less than 30,000 new patients per annum**

- If these departments have inadequate levels of support from other specialties or persistent staffing recruitment difficulties, then the role of such departments as major A&E departments should be reviewed.

- However, A&E departments of this size in geographically isolated areas should be fully supported in providing the optimal level of safe care for their local population. Such units should be staffed in the same way as those seeing 30,000 or more new patients.

- In some areas, the role of smaller departments would dovetail with the government strategy to expand the role of minor injury units or similar facilities.

The BAEM would support the development of such units where appropriate. These could be staffed by non-consultant career grade medical staff and emergency nurse practitioners. Such departments would not be able to support the training of SHOs or SpRs although, subject to approval, could provide training and experience for medical staff on rotation. Where possible medical and nursing staff working in such units should either rotate with A&E departments or be seconded for continuing professional development to such units.

The opportunity to use telemedicine in support of such units should be evaluated.

The standards of medical care in such units should be under the direction of a consultant in A&E medicine.

These departments would be dealing with those patients with minor injuries and minor illness who are in triage categories 4 and 5 (green and blue). The departments would only be able to receive ambulance borne patients subject to locally agreed safe protocols. It would be essential for the medical and nursing staff in such departments to be able to provide the initial resuscitation for ambulance-borne patients subsequently requiring transfer. Minor injuries units cannot be considered capable of providing the same standards of resuscitation facilities as an A&E department.

4.0 Medical Staffing

4.1 WORKLOAD

A&E departments provide a 24-hour/day seven days/week service and must be resourced to ensure safe levels of staffing throughout this period.

Measures of clinical workload for A&E departments have traditionally been based on the number of new patients attending.

The different patterns of service provision, for example whether GP referrals are assessed within the A&E department, has made this imprecise. In addition, such a measure takes no account of case-mix.

A&E attendances are categorised by the National Health Service Executive as first attenders and follow-up attenders, either planned or unplanned. It is recommended that these groups be subdivided into:

- new A&E patients
- triage patients
- accepted patients
- unplanned returns
- returns for investigation, and
- attendances at an A&E clinic.

See Appendix 1 for definitions of these terms.

Levels of A&E medical staffing should be based principally upon the number of new A&E patients (plus the number of returns) until more accurate methods of assessing departmental activity become available, for example case-mix data.

The number of returns should be less than 10% of new patient attendances. Determination of the level of nursing and support staff required must be based on all categories of patient.

Consultants

All A&E departments must be consultant led. In order to provide continuity of cover during periods of annual leave and study/professional leave, all departments should aim to have three or more consultants. In order to meet this target, there must be a fully funded expansion of the number of SpR posts to prime consultant expansion.

If departments have fewer than three consultants, consideration must be given to other ways of providing senior leadership during leave, such as the employment of a locum consultant or the substantive appointment of an associate specialist.

The principal role of the consultant is to provide leadership and supervision, as well as teaching of junior medical and other staff. The level of direct clinical involvement will vary with the workload per consultant. Time for training, teaching, supervision, administration, research and audit should be identified in the consultant's job plan.

Shopfloor cover

Scheduled consultant presence within the department outside the normal working day is not sustainable with fewer than three consultants.

For departments with the minimum recommended consultant staffing levels, it should be assumed that consultants will spend all scheduled shopfloor time leading resuscitation and supervising and teaching more junior staff. If

consultant numbers rise significantly above these levels, it might be possible for consultants to contribute more to service provision and reduce the need for non-consultant career grade staff. Until such a level of staffing is achieved, consultants cannot replace middle grade staff.

4.2 NON-CONSULTANT CAREER GRADE DOCTORS

Associate specialist

To be appointed as an associate specialist, a doctor must be ten years post full registration and have spent at least four years in the registrar or staff grade. At least two years of this must have been in A&E. These doctors are to be considered senior doctors and have a level of responsibility similar to that of a consultant.

Staff grade (non-consultant career grade doctors)

Trusts have the freedom to negotiate locally on terms and conditions for staff grades and the new national model contract for staff grades is more flexible than previously. There is now no national or regional numerical restriction on the appointment of staff grade doctors in any specialty. Staff grades can be part of a rota providing out-of- hours and on-call cover. The BAEM recommends that non-consultant career grade doctors should no longer be appointed to posts with titles other than associate specialist or staff grade. So called 'Trust grade' doctors are staff grades by another name; the general adoption of the appropriate title would make this clearer to patients.

To be appointed as a staff grade in A&E, a doctor must have spent at least three years in the SHO or higher grade, of which at least one year must have been in A&E. The staff grade is designed to be a service grade, but contracts should include time for audit and continuing professional development. These posts must be made attractive to UK and EEC doctors who for personal reasons wish to apply for a career grade post without completing specialist training.

Typically a 13-session staff grade will spend ten or eleven four-hour sessions on shopfloor work. A staff grade should have six weeks of annual leave, ten bank holidays and ten days of study leave per year. Thus, ten sessions of shopfloor work per week equals 1,000 hours per year. The staff grade doctor will also have other roles, eg teaching, supervision, seeing return patients, checking radiographs, etc. In departments with one staff grade doctor, these duties will reduce the capacity to see new patients. As more staff grade doctors are appointed, this workload can be shared, thus allowing more patients to be seen.

A programme of continuing medical education must be available, encouraged and resourced.

Senior SHOs

In some departments, experienced SHOs wishing to specialise in A&E, but who do not yet have the experience or qualifications to enter a SpR post, may be employed in posts with titles such as 'resident medical officer' or 'Trust grade doctor'.

Clinical Assistant

This appointment, also known as part-time medical officer, is intended for doctors who are general practitioners who work under consultant supervision in a hospital specialty for a maximum of five sessions per week. Such appointments are also available to doctors who are not GPs but who wish to work on a sessional basis in a hospital specialty.

If a department wishes to appoint a doctor for more than five sessions a week then a staff grade appointment is appropriate - either full or part-time.

The service contribution of clinical assistants will be similar to that of a staff grade doctor per scheduled shopfloor hour.

4.3 SPECIALIST REGISTRARS

Specialist registrars in A&E follow a five-year training programme to become consultants in A&E medicine. In year one, they will have a higher medical diploma but may have as little as two years' post registration experience with a recommended minimum 12 months' experience in A&E.

Service contribution

SpRs can be contracted for up to 56 hours of actual work (56 hours full shift, 64 hours partial shift or 72 hours on-call rota). SpRs require allocated time for audit, research, teaching and administrative responsibilities within this 56 hours. There is currently no nationally agreed model for how much time should be spent on the shopfloor, but this document assumes that, when not on secondment, an SpR contributes directly to service for 50% of their hours of work.

SpRs are entitled to six weeks' annual leave unless they are on one of the bottom two points of the payscale. They are entitled to ten bank holidays and up to thirty days' study leave per annum. This leaves 40.5 weeks not on leave.

SpR training includes secondments to other specialties for up to four three-month blocks with additional sessional secondments to the 'minor' specialties. Experience must be gained reviewing return patients, unplanned returns, pathology and X-ray reports, etc.

The overall effect of secondments and study leave is that a full-time SpR can be considered to have a shopfloor availability equal to 70% of that of a staff grade. It is not usually possible for the remaining middle grades to undertake all the service commitment for that SpR as well as their own. Thus, either the rota must be changed or a locum must be employed to cover this period (locum appointment for service). In a department with one, two or three SpRs, locums should be employed to cover secondments, but for a department with four SpRs, a rota can be designed to allow one to be on secondment at a time. The cost of locums should be incurred as part of the estimate of training costs.

In general, the number of consultants should exceed the number of SpRs. At present, there is a shortage of consultants and in the short term some units with well developed training programmes may not meet this recommendation.

Middle-grade cover

All A&E departments should have on-site cover by doctors more experienced than SHOs for as much of the week as possible.

This role can be filled by SpRs, staff grades, associate specialists or consultants. In general, medium-sized departments should aim to have at least sixteen hours a day of middle-grade (SpR or staff grade) on-site cover. If working a 40-hour week, this requires at least six middle-grade doctors. Large departments should aim to have 24-hour on-site middle-grade cover, which would require eight middle grade doctors.

4.4 SENIOR HOUSE OFFICERS

These doctors are training for many different hospital specialties or for general practice. The majority of their training will be in the form of experiential learning and supervised clinical practice. Thus, SHOs should spend the vast majority of their contracted hours on the shopfloor seeing patients.

Workload

In order for SHOs to benefit from their training in A&E, they must not be overworked and they must be adequately supervised by more experienced doctors, (see appendices 2 and 3).

Supervision

All A&E SHOs must be under the overall supervision of one or more consultant in A&E medicine.

National medical staffing policy is to try to bring the number of doctors in each grade into balance taking into account career prospects. At present, the total number of SHO posts across all specialties is in excess of that needed to

supply SpR and GP registrar recruitment. Consequently, the NHS Executive intends that total SHO post numbers across all specialties should decrease or at least hold constant until the number of SpR and consultant posts has expanded (HSC 1998/025). There are currently some 1,500 approved A&E SHO posts in England and Wales. All recommendations in this document are based on the assumption that this total is unlikely to be allowed to rise significantly during the lifetime of this document.

The recommended minimum medical staffing of A & E departments based on numbers of patients attending is set out in Appendix 4.

5.0 Quality and Standards in A&E Departments

A&E has seen unprecedented change recently and the development of new models of care provision. This has increased the importance of regularly monitoring the quality of care and of developing mechanisms to disseminate best practice.

All A&E departments should have active audit programmes and demonstrable commitment to the teaching and professional development of all staff.

The Academic Committee of the BAEM and the Faculty of A & E Medicine produce guidelines of good practice on both clinical and operational matters and these should be implemented. External assessment and audit should also be encouraged.

Departments providing training for SHOs and SpRs will be subject to regular inspection from the Hospital Recognition Committee of The Royal College of Surgeons, the General Professional Training Subcommittee of the Royal College of Physicians, regional deans and the JCHT A&E (Joint Committee on Higher Training in A&E Medicine, formerly the SAC) or its local representatives. High standards are expected and training posts will be withdrawn if these are not maintained.

External accreditation is currently available from a range of organisations both generic and specific to the NHS. Some departments have, for example, sought recognition from existing industry standards such as BSI and Investors in People, though their relevance to a medical setting may be limited. It is essential that all such organisations have common targets regarding quality and standards.

The two main accreditation systems within the NHS are the King's Fund and Health Services Accreditation. HSA places heavier emphasis on clinical quality and has been developed with significant input from the specialty itself. It is the BAEM preferred system. It sets a wide range of standards for facilities, staffing, and clinical processes identifying those essential to a satisfactory service and others which are an ideal to which departments should aspire.
The BAEM is developing a peer review system along the lines successfully piloted by the British Thoracic Society. This will complement accreditation and will aim primarily to provide advice and support to consultant staff. The objective is to encourage service development and promote excellence. Pilot studies are being planned in Northern Ireland and Scotland and in a matched pair of English regions.

There are no immediate plans to make accreditation compulsory. The significant cost of these systems needs to be recognised and their cost-effectiveness evaluated.

It is the BAEM view, however, that openness to external scrutiny can only improve the reputation of our specialty and the service it provides.

6.0 Teaching and Research

A&E departments provide a unique environment for teaching and research.

Provision in terms of staffing and funding must be available to allow teaching of all members of staff and, in addition, teaching for other specialists and other professions.

A&E medicine offers major opportunities for research for a wide spectrum of health care worker. These initiatives should be encouraged and supported.

There is a need to increase the number of A&E departments active in research and establish more opportunities at SpR levels in order to support expansion of senior academic posts in the specialty.

Internationally there are generally inadequate data to provide reliable evidence for many aspects of A&E medicine. This must be a focus for research in the specialty.

7.0 Relationship Between A & E Medicine and Primary Care

The BAEM and the Royal College of General Practitioners have developed a document of agreement in principle and are currently working to address the important issues in which there is a shared interest.

The principal areas in which the relationship can be developed in the short term would include:

- The recognition that there is a shared interest and ability to deal with a number of patients attending A&E departments who could equally well be managed in a general practice facility.

  Attendance of these patients in A&E departments may be driven by the patient's perception of the urgency of their condition and their requirement for access to a healthcare professional.

  Whilst it is recognised that there have been significant improvements in the accessibility to general practitioners, there remains the potential for further improvement in this area, for example the availability of emergency same-day appointments.

- There is considerable variation nationally in the percentage of patients attending A&E departments who are appropriate for management by general practitioners working within the department. In both specialties, there are areas of shared capability and expertise but other areas in which this does not exist. It is as unreasonable to expect a general practitioner undertaking one session a week in an A&E department to be dealing with the most complex A&E problems as it would be to expect an A&E specialist to function at a similar level within general practice.

  The service provided by an A&E department is considerably influenced by the way in which local general practitioners work. By planning developments in consultation with A&E specialists, local GPs have a real opportunity to improve the quality of provision for accidents and emergencies.

- In some areas, there will be the opportunity for general practice co-operatives or a general practice walk-in clinic to be sited next to the A&E department. This would offer many advantages and could be arranged around a central triage point which would allow patients to be directed appropriately. General practitioners would then have access to the diagnostic facilities available within the hospital. The use of such investigative facilities by general practitioners is less frequent and more rational than that used by junior

hospital doctors. Similarly, an A&E opinion would be available where required.

In general, the BAEM would welcome the opportunity to develop the role of primary care walk-in clinics, either sited within hospitals or in the community. This would allow patients rapid access to a general practitioner after which referral to an A&E department could be arranged if necessary.

The use of telephone triage and advice lines should be encouraged in order to improve the speed of access to the correct facility.

8.0 Summary of the Strategic Direction

Day-to-day, our specialty responds to a wide range of emergency situations. These are usually unexpected events. Staff in our departments aim to provide high standards of care through knowledge, commitment, willingness to be flexible in attitudes and work practices, and through innovation.

The same skills and attributes will be required to drive the specialty of A&E medicine in the future form of the National Health Service and particularly the way emergency care, in all its aspects, will be delivered.

The future provision of emergency care is likely to place greater emphasis on integration across the whole spectrum of care, from self-help to specialist tertiary referral centres. Our specialty must play a significant part in working with the many other groups across that spectrum.

We must recognise wholesale change is rarely appropriate. All proposals for change require sound evaluation and must take account of local economic, political and geographical factors. The guiding principle in assessing change in service configuration and delivery should be improving the quality of emergency care. However, when radical change is shown to be necessary and appropriate it should not be blindly resisted.
The broad strategic direction for emergency medical care should always be towards flexible and responsive, high quality emergency medical care for those patients who are most likely to benefit from the specialist skills only available in an A&E medicine department.

The mid to long-term goals will include emergency medical care which is evidence-based, cost-effective, and integrated with primary, secondary and tertiary emergency care.

To achieve these goals it will be necessary to:

- recognise that some rationalisation and centralisation of emergency services will be appropriate;

- provide high quality basic and higher training in A&E medicine to ensure adequate numbers of trained doctors and ultimately provide 24-hour experienced cover of all departments;

- use relevant clinical outcome measures and accessible management information to allow analysis of workload and appropriate funding related to case-mix, rather than simple new patient attendances;

- ensure that all staff in A&E departments have the appropriate training and skills, and that these skills are deployed in the most effective way. This will include the increasing development of emergency nurse practitioners and involvement of other professions;

- co-operate more closely with all agencies and medical services contributing to emergency care. Our aim is to ensure patients receive accessible and cost-effective care from the most appropriate source. This approach will challenge many of the traditional roles and responsibilities in the care of emergencies.

9.0 Pre-hospital Care

9.1 THE AMBULANCE SERVICE

A successful and co-operative working relationship with the local ambulance services is essential to ensure that optimal standards of care are agreed and practised throughout the continuum of care from the scene into the A&E department.

It is recommended that ambulance crews at the scene and whilst in transit have direct communications with senior doctors, experienced in pre-hospital care and with a good knowledge of local paramedic protocols. There should be agreed guidelines indicating which cases should be discussed in this manner, but the principle should be that where there is any delay or difficulty, then medical advice should be available.

Similar guidelines should be prepared to ensure that A&E departments are warned of patients en route to the department for whom advance preparation is required, for example the seriously ill and injured, sick children, etc.

It is recommended that regular meetings be held between the A&E department and local ambulance crews and managers to review activity. A formal audit procedure should be in place to monitor the standards of care.

A&E staff should have an active role in the training of ambulance service personnel.

9.2 BASICS

The BAEM appreciates greatly the invaluable contribution of BASICS members to the management of the seriously ill and injured in the pre-hospital environment. Indeed, many A&E doctors are represented in BASICS membership.

The BAEM would wish to continue to support this work wherever possible, in particular with regard to training, advice and audit.

10.0 Accident Prevention

A&E departments should establish close working relationships with local agencies involved in accident prevention, in particular the police, fire and rescue service and accident prevention agencies with interests in children and the elderly.

Comprehensive data collection is an essential research tool for accident prevention and injury management research. In addition to the epidemiological data, A&E department staff should assist in identifying and implementing strategies which will prevent illness and injury amongst the local community. Such work may, for example, include school visits.

11.0 Secretarial Support

It is essential that A&E departments have adequate and dedicated secretarial support to ensure that correspondence in and out of the department is processed without delay.

The exact level of support required will depend on a number of factors including the total number of patient attendances and numbers of consultant medical staff, but there should usually be one full-time secretary for each consultant.

12.0 Management Support

The provision of adequate and dedicated management support is essential to allow departments to function optimally on a day-to-day basis and to recognise and respond to the wide-ranging developments occurring within the specialty, for example, the relationship with other hospital specialties and primary care. Such support will optimise the liaison with the management structure within the hospital.

The A&E department must be represented at the appropriate Trust management meetings and have access to the Trust board.

The management team should include a service or business manager, accountancy expertise and information support.

The complexity and volume of information demands that departments must be computerised.

PATIENT DEFINITIONS

New A&E patients
Patients who are seen and managed by an A&E doctor or nurse practitioner who also make a written record of the interaction. This includes those who are subsequently referred to another specialty.

Exclude triage patients, accepted patients, all returns, and clinic patients (see below).

Triage patients
Patients whose only contact with the A&E department is with the triage nurse or triage doctor.

Accepted patients (lodged patients)
Patients who are treated in A&E solely by medical staff from another specialty, but who may receive nursing care from A&E nurses. These patients are usually referred directly from GPs to in-patient clinical teams.

Such patients place demands on A&E resources and should be counted as a separate group of attendances.

Unplanned returns
Patients who return unexpectedly to the A&E department within five days of being seen there. Such patients should not be counted as a new attendance.

This does not include the small number of patients who return within this time with an unrelated condition.

Returns for investigation
Patients who return to the A&E department at a more convenient time for investigations, eg X-rays. Such patients should not be counted as a new attendance.

Attendances at an A&E clinic
Patients who attend an A&E clinic by appointment. They may be divided into

- referrals from GPs or from other specialties; and
- planned returns.

These patients should be identified as separate groups when assessing department activity.

SHO WORKLOAD

- All SHO posts must meet the contractual requirements of the New Deal. A&E SHOs should work full shifts, with the exception of a small number of units dealing with fewer than 30,000 patients a year where a partial shift may be appropriate.
- Shift lengths must not exceed twelve hours; in general shifts of eight to ten hours are preferred.
- There must be a minimum of eight hours off-duty between shifts.
- No more than thirteen days may be worked consecutively without at least 24 hours off-duty.
- One period of 48 hours and one period of 62 hours must be rostered off-duty in every twenty-eight days.
- The maximum average hours of duty must not exceed 56 hours per week.
- Shifts must include time for natural breaks, ie, meal breaks and coffee breaks.
- Contracted duty hours should include four hours of protected teaching per week.

We recommend in addition:

- Shift patterns should involve working for at most 60% of weekends.
- Shift patterns to cover 24 hours should be based on at least six SHOs working a 40-hour week. This will allow prospective cover for annual and study leave.
- If fixed leave is built into the rota, then SHOs should be given a chance to elect leave periods.
- The consultant in charge will have the final decision.

Minimum Number of SHOs
Six SHOs working 40 shopfloor hours per week are the minimum number required to cover a full shift pattern to cover 24 hours including prospective cover for annual and study leave.

For less than five SHOs, the rota must be shared with non consultant career grade doctors or involve cross cover with SHOs from another specialty.

Number of patients per SHO
In order to allow time to learn from their clinical experience, SHOs must not be expected to see excessive numbers of patients.

An SHO taking the full allocation of annual and study leave will be available for 41.5 working weeks per year or 1,660 annual hours at 40 hours per week. An SHO scheduled for 40 hours of shopfloor work per week may attend to 3,500 patients per annum although this depends entirely on the case-mix of the patient workload. This approximates to an average of two patients per

hour. This is considered as one service equivalent used in the medical staffing calculations in Appendices 3 and 4. If rostered for more hours of shopfloor work then the number of patients attended can increase pro-rata.

Protected educational time (minimum four hours per week) should not be counted in considering the service contribution of SHOs.

Previous BAEM recommendations have been for a number of SHOs per new patient attendances. This guidance now recognises SHO numbers should not be set purely by service need but rather also by the need to provide training at this level.

KEY POINTS

Consultants cannot contribute to basic service workload as well as supervising junior staff unless the number of consultants is in excess of minimum numbers.

- Non-consultant career grade doctors should only be appointed in the staff grade or associate specialist grade.
- Rotas and shift patterns for doctors in training must meet the New Deal requirements.
- Prospective cover for leave should be included in contracted hours where possible.
- Minimum consultant numbers are unlikely to be exceeded so any flexibility is in other grades of staff.
- SHO and middle grade staff numbers are given in 'service equivalents' based on 40 hours of shopfloor work per week and prospective cover.
- At 40 hours a week an SHO can be considered 1.0 service equivalent, the first staff grade 0.5 service equivalent, with subsequent staff grades 1.0 service equivalent, and an SpR 0.3 service equivalent (70% of a staff grade).
- 1.0 service equivalent can attend to 3,500 A&E patients per annum.
- All staffing levels assume prospective cover for a full allocation of annual leave and study leave. If locums are employed for leave, either fewer staff are needed or the contracted hours per doctor will be fewer.
- If there is a shortfall in numbers of one grade of middle or junior staff, this must be compensated with increased numbers of other grades.

RECOMMENDED NUMBERS OF MEDICAL STAFF

Whilst all A&E attendances contribute to the overall workload of the department, for the purposes of recommended numbers of medical staff, only new A&E patients and return A&E patients must be considered. For every 3,500 such patients, 1.0 service equivalent is required if a quality service is to be established and waiting times improved.

Table A sets out the recommended **minimum** number of consultants and of other medical staff for departments of different sizes.

Table B gives the service equivalent value of different grades of staff for different numbers of hours, amounts of prospective cover and proportions of time spent on secondment for SpRs.

How to use these tables.

The service equivalent required by a department can be determined from Table A and the service equivalent potential of a department's current staffing establishment can be calculated using Table B.

If there is a shortfall between the staffing need of a department and current staffing, the BAEM would support attempts to increase the staffing level.

Table A. Recommended minimum staffing level of A&E departments based upon number of new and return Patients.

Number of A&E Patients (New plus returns)	Consultants	Service Equivalents
30,000	3	9
35,000	3	10
40,000	3	11
45,000	3	13
50,000	3	14
55,000	4	16
60,000	4	17
65,000	4	19
70,000	4	20
75,000	4	21
80,000	5	23
85,000	5	24
90,000	5	26
95,000	5	27
100,000	6	29

This would provide a consultant-led service.

Calculations are based on the best available evidence including data from *The Way Ahead 1993* and sample departments in the United Kingdom.

An approximate guide is one service equivalent (SE) per 3,500 patients.

SHO = 1 SE
SpR = 0.3 SE
SG = 0.5 SE first post
1 SE for each additional post

For example, a department seeing 55,000 patients per annum should have four consultants and 16 service equivalents.

If the department was currently staffed with ten SHOs contracted for 44 hours each (ten service equivalents), two staff grades working ten sessions each week (1.5 service equivalents) and three SpRs contracted for 56 hours each week with three months on secondment (1.5 service equivalents), this would represent a total current medical staffing of 13 service equivalents. This is three service equivalents less than recommended.

Given the present situation with regard to additional SHO posts, the department would then be able to bid to improve its medical staffing numbers by increasing the number of middle grade staff using SpRs, non consultant career grade doctors or a combination.

The shortfall in middle grade staffing must be funded.

Emergency nurse practitioners may be able to contribute to the service provision. Whole-time ENPs should be regarded as representing 0.5 of a service equivalent.

This system is designed to provide flexibility to reflect local factors when planning medical staffing.

Table B. Service equivalent values

Grade contracted hours	Prospective cover for	Service equivalent value
SHO	44 AL + SL	1.0
SHO	44 AL only	1.1
SHO	44 none	1.3
SHO	56 AL + SL	1.3
SHO	56 AL only	1.4
SHO	56 none	1.6
	Includes 4 hours teaching	
SG	40 AL + SL	First post
SG		0.5
SG	40 AL + SL	Subsequent posts
SG		1.0
	40 AL only	1.0
	40 none	1.2
	3 months secondment	
SpR	40 AL + SL	0.4
SpR	40 AL only	0.4
SpR	40 None	0.5
SpR	56 AL + SL	0.5
SpR	56 AL only	0.5
SpR	56 AL only	0.5
SpR	56 None	0.6
	Locums for secondments	
SpR	40 AL + SL	0.5
SpR	40 AL only	0.5
SpR	40 None	0.6
SpR	56 AL + SL	0.7
SpR	56 AL only	0.7
SpR	56 None	0.8

AL = annual leave
SL = study leave

Inadequate Staffing levels

When the number of patients attending an A&E department is such that SHOs are expected to see more than the number of patients set out above, the following courses of action are possible:

- ensure that there are sufficient middle grade and senior staff in post to provide adequate supervision and support;
- transfer workload to other staff such as by expanding the roles of nurses as practitioners;
- consider altering the hours of the current staffing establishment;
- appoint additional non consultant career grade staff to meet the service shortfall;
- apply to the regional postgraduate dean and regional task force for staffing approval for additional SHO posts.

It must be noted that national medical staffing policy is to try to bring the number of doctors in each grade into balance taking into account career prospects. At present the total number of SHO posts across all specialties is in excess of that needed to supply SpR and GP registrar recruitment. Thus the total SHO post numbers across all specialties should decrease or at least hold constant until the number of SpR and consultant posts has expanded.

Additional SHO posts are unlikely to be granted unless by transfer from another specialty or as part of site rationalisation.

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The Working Party is grateful for all the constructive comments which have been received from colleagues during the preparation of this document.

The document will be revised every two years with the next update to be published in September 2000. Comments and suggestions for incorporation in the next edition are welcome and should be forwarded to the Honorary Secretary at the BAEM office.

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