Research in accident and emergency medicine

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The acquisition of knowledge is the mission of research, the transmission of knowledge is the mission of teaching and the application of knowledge is the mission of public service. *James A Perkins quoted in the New York Times*, 3 November 1966.

Accident and emergency (A&E) medicine occupies a pivotal role in the British health care system yet its research output lags behind that of other specialties. A consensus statement about research in emergency medicine has been published in the United States. We are not aware of any similar work in the United Kingdom and believe A&E will not fulfil its research potential without clear strategic thinking.

In this article we pose the questions about the future of research in A&E medicine we believe to be fundamental, and suggest answers to some. Even if our views are thought to be irrelevant or incorrect our aim will be satisfied if they provoke thoughtful debate and consensus.

**Why?**

Diverting resources to research must be justified. The primary goal of A&E research must, therefore, be the improvement of patient outcomes. We recognise that high quality research would have other benefits but our “answers” to subsequent questions are based on this assumption.

**How?**

If its aim is to improve patient outcomes, it is vital that A&E research is of the highest possible methodological quality. It may be harmful to base practice on the results of studies in which the methods do not ensure validity. Clinicians require the skills to appraise research otherwise they may act upon “bad” research.

We must make the best use of the limited resources available for research in A&E. Unintentional duplication is wasteful, as are trials without sufficient statistical power. The former problem will be helped by the register of proposed and ongoing trials being developed (if reference is made to this register before research is started) and by adequate systematic review of relevant publications. Collaboration between centres will be needed in many instances to provide adequate power. It would be logical for there to be an international register and international collaboration with individual studies (when appropriate). We question the ethics of conducting clinical research without first thoroughly reviewing existing reports, and of entering patients in clinical studies that are unlikely to yield clinically useful results.

**Who?**

The skills needed to carry out original research are not a prerequisite for practising A&E medicine (or any other clinical specialty). One can argue, however, that the ability to appraise published research is essential for clinicians. It seems sensible, therefore, to concentrate resources on those who want to carry out research.

Until there is a sufficiently large group of A&E doctors with the skills needed to plan and execute high quality research, collaboration with other specialties (such as biostatistics and clinical epidemiology) will be crucial. It may be useful to establish a list of people from outside A&E who have collaborated with the specialty and wish to do so again. While collaboration will have many advantages, training A&E doctors in research skills will be needed if the specialty is to become self sufficient. Investment in the training of those who will lead A&E research will be needed for this. Both the Faculty of Accident and Emergency Medicine and BAEM provide limited funds for research. One criterion for the allocation of these might be that they be used to support those who have already demonstrated an interest in and a flair for original research.

**Where?**

There may be a “critical mass” needed for efficient and high quality research. Collaboration and training may be more feasible if those with the skills and interest are concentrated in a limited number of sites.

**What?**

A&E research will have to dovetail with national research and development priorities to maximise the likelihood of receiving substantial resources; the scope for research funded by charities is limited. Although there are many areas where there is a shortage of primary
research, it would be potentially wasteful to neglect integrative research (systematic reviews and meta-analyses). This highlights areas where evidence is missing or of limited quality. The specialty needs to establish a set of priority areas that should be resourced in preference to others. The way in which these are selected is likely to be controversial. Consideration might be given to clinical problems that are high volume, have high clinical or economic cost, are associated with complaints or litigation, or where practice is currently variable. Although, perhaps, less "sexy" than clinical or basic scientific studies, research in policy or managerial areas (such as the optimal way of managing primary care problems) is needed.

**Conclusion**

We believe the following questions are fundamental:
- Is research in A&E needed (and, if so, why)?
- What are the best ways to conduct research in A&E?
- Where should it be done and by whom?
- What are the topics where the need for research is greatest?

Although the answers to some of these may be difficult to find or to action, we fear that if the specialty fails to address these issues it will become a research "also ran".

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**MANAGEMENT ISSUES**

**Chairing a meeting**

A&E consultants spend a lot of time at meetings. It is therefore important that such time should be productive. Much can be achieved by defining the objective, planning the meeting, and firm but friendly control. This should result in clear summaries and a plan for action.

**Define the objective of the meeting**

Time can be wasted during the meeting if the chairman is unclear of the real objective. If there is no definite objective, the value of holding the meeting should be questioned.

**Preparation**

Decide who needs to be present to achieve the objective. People with essential contributions must be included, even if it is felt that their views may be divergent. Too many people attending leads to confusion and delays. Some committees, as a statutory or legal requirement, have to have defined officers present. Ensure that these key people (or nominated representatives) can attend. The agenda should be prepared carefully. It may be helpful to divide it into sections, for example: For information; For discussion; For decision. Important items should be placed early in the meeting to allow adequate time for debate when minds are fresh. It is helpful to have a margin note of the anticipated timing of each item. The chairman should be informed and briefed on all the items on the agenda. This will involve discussion with leading contributors before the meeting. It will also flow more smoothly if the officers (chairman, secretary, etc) have been over the agenda beforehand. When the agenda is completed and approved circulate it in good time. An uninformed committee takes longer to reach any conclusion. When committees are to take controversial actions there is a risk of protest and anger if the agenda is received late, allowing little time for planning and thought.

**Conduct of the meeting**

Begin by welcoming the committee and outline the objectives and timing of the meeting. A good chairman actively encourages participation and lively positive debate. Despite this philosophy the chairman must control the debate. It is important to prevent anyone from monopolising the time. At all times concentrate on the matter under discussion, preventing deviation from the subject which leads to confusion and delays. Summarise at the end of each item as it is completed, emphasising actions to be taken and by whom. The chairman must accept that certain matters cannot be resolved at once. Do not waste time on the unsolvable. Further information and informal debate outside the meeting may be needed and the item rescheduled for the next meeting. Controversial views must be heard, but may need to be controlled within the group discussion. A good chairman controls forceful participants and actively encourages the shy. Do not allow your attention to wonder. Watch for problems (misunderstanding, aggression, disinterest, and monopolisation). Strive for clarity and open, honest debate. Keep an eye on timing.

**After the meeting**

Some meetings require minutes to be recorded and written up. Review the conclusions and actions necessary. Do not walk away expecting others to perform things just because you have been in charge. Clarify actions in the minutes and circulate them well in advance of the next meeting.

**Conclusion**

The success of a meeting depends on understanding the objective together with good preparation and concentrated control. Conclude with a clear summary and action plan.

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