

enhance the quality of studies undertaken by junior doctors.

Under the shareware system of computer software distribution software is offered free to potential users, who are trusted to register with the author if they decide to use the system.* This radical idea could be applied to research.

Some doctors doing well conducted research generate more ideas than they have time (or perhaps inclination) to pursue, and I would like to propose that specialist journals carry an occasional column in which those with "spare" project or research ideas suitable for junior doctors would publish brief details of the idea. Interested juniors (or others) could then contact the originator of the idea to discuss details and arrange local supervision if necessary. Any resulting publications would carry the name of the proposer as the originator of the study idea, together with the author's name. (Such a split of the author list has been suggested elsewhere.⁵)

There would be no losers with such a scheme. Readers of journals could expect a higher content of significant work, juniors would get the publications they need, and the originators would receive recognition for ideas that they might never otherwise have had time to pursue.

I hope the academic community will be far sighted enough to recognise the potential benefits of such a scheme, and the specialist journals brave enough to champion it.

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*Further information on the computer shareware scheme can be obtained from: Shareware Marketing, 87 High Street, Tonbridge TN9 1RX.

Teaching junior doctors practical procedures

SIR,—Dr Alison Walker points towards one of the most neglected aspects of junior doctors' training.¹ I would like to mention a few points that contribute towards their poor performance.

There is minimal input by the senior hospital staff in teaching practical techniques to their juniors. Most house officers learn practical procedures from other junior staff, usually in the middle of the night. In most instances the tutors themselves lack skill and knowledge regarding these procedures.

Medical publications give little coverage to practical procedures, considering the number and variety that are performed in practice. There are few standard books exclusively designed for teaching these practical skills, and only a handful of current journals provide any coverage of this aspect of medical training.

Simulated training at medical schools is a reasonable option, but few students have the ability to retain full information step by step after attending a few demonstrations.

The answer lies undoubtedly in more "hands on" experience with practical procedures. Audio-visual teaching can have a vital role in this respect. Video films on practical medical procedures, made with the help of experts in a specialty, can explain procedures step by step in detail with special emphasis on indications, contraindications, and common pitfalls. As most libraries and post-graduate medical centres already possess televisions and video recorders this would not impose extra expense on an already overstretched system. These

videos can be stored permanently in medical libraries and would help junior staff to learn these techniques.

There should be far more courses arranged for junior doctors involving simulated training, audiovisual aids, and practical demonstrations. These courses should be frequent so that the important aspects of these skills can be reinforced. Such courses should be compulsory for junior and middle grade staff and could also include relevant nursing staff.

Shorter working hours decrease exposure to patients and hence lead to lack of experience, but if doctors can spend less time in performing para-medical tasks such as taking blood samples, filing laboratory reports, and taking specimen samples from the wards to the laboratories then they will have more time to learn practical medicine.

In this time of change the emphasis should be on improving the quality of patient care. The notion of "see one, do one, teach one" should be changed to "see again and again, practise again and again before attempting one."

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Starting again with clinical research

SIR,—The news item by Dr Richard Smith refers to "the poor performance of the Clinical Research Centre (CRC) at Northwick Park."¹ The evaluation of research is at the best of times fraught with difficulties of comparison and subjective bias. One approach to the problem is citation analysis. I illustrate this by reference to my own research division.

In 1988 the Institute of Scientific Information conducted a co-citation analysis of the literature on schizophrenia (the main focus of the work of this division since its inception in 1974). This technique identifies a "research front" of recent source papers that together refer to earlier "cited core documents" and in this way attempts to identify topics on which significant advance is taking place. In this case the analysis identified one particular front (ISI No 271 with the headings dopamine hypothesis, negative symptoms, neuroleptic induced akathisia, anatomical brain imaging, cerebral ventricular enlargement) that lay well ahead of any other front relating to schizophrenia.

In this analysis I was able to ascertain papers from this division and to compare the impact of our work with that of other departments with an interest in the problem—for example, the Institute of Psychiatry and other university departments in this country, and the intramural programme of the American National Institute of Mental Health and the University of Iowa, both of which emerged as leading contributors to the world literature on schizophrenia.

It appeared (table) that the CRC Division of Psychiatry had made a contribution out of proportion to its size (seven to eight scientists and a similar number of technical staff). Thus of 96

Co-citation analysis of published papers relating to schizophrenia

	Britain			United States	
	CRC Division of Psychiatry	Institute of Psychiatry	Other departments of psychiatry	University of Iowa	National Institute of Mental Health
No of source papers	9	4	6	1	4
No of frequently occurring authors	8	2	5		7
No of cited core documents	8	6	2	4	6
Rank order of cited core documents (to 20th)	1st, 3rd, =10th, =19th	=16th, =19th		=4th, =4th =10th, =13th	=7th, =10th, =19th

papers in the front as a whole it had contributed nine, and these included eight different first authors as compared with seven from the entire intramural programme of the National Institute of Mental Health. Most significantly, eight of the 57 cited core documents had come from this division, and in rank order these included the first² and third³ contributions (the second being Bleuler's monograph of 1911 that gave a name to the condition). I concluded that in its relatively brief life the division had made an impact on the literature that at least rivalled that of much larger institutions that had long preceded and will outlive it.

Much of this work involved investigations on patients, the raison d'être of the centre. But molecular biology was not neglected, and the first mutation (an insert in the prion protein gene) to have a pathogenic role in disease of the central nervous system was identified⁴ and sequenced⁵ in the division. We also contributed to identifying the second such mutation,⁶ in a condition that earlier we had shown to be transmissible to primates.⁷

Most of those who contributed to this work have now left or are leaving. By way of acknowledging their contribution I take this opportunity to point out that such evidence as I have quoted suggests that at Northwick Park the environment may not have been inimical to significant clinical and laboratory research in psychiatry.

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Immunotherapy and hay fever

SIR,—The report of the trial of immunotherapy for hay fever by Dr V A Varney and colleagues¹ is open to criticism on three points.

Firstly, the injections were given by "operators" who were aware of the trial code. This procedure might be acceptable for a trial in which the operators believed the active treatment to be ineffective or possibly if treatment was given on only one occasion. In this trial, however, the operators interviewed the same subjects on at least 15 occasions and inquired about delayed local reactions to the previous doses. What is more, the vaccine dosages of three of the 21 actively treated patients were reduced as a result. The blind protocol of this trial seems to be a fiction.