THE AMERICANS are making enormous efforts in the field of continuing medical education.

In 1962, 8,000 new graduates applied for 12,000 internships through the National Internship Matching Programme, in which their applications are speedily sorted and settled by a computer. The refusal of the Council on Medical Education and Hospitals to approve internships in which education is subordinated to service has acted as a great stimulus to district and community hospitals to develop their educational programmes. In 1962 there were 911 Directors of Medical Education in American hospitals, of whom no fewer than 482 were full-time.

The expenditure on hospital libraries has been vast by English standards. For instance, the Rhode Island Hospital, which is not a teaching hospital, spends $15,000 a year on its library, of which $1,000 are spent on new books alone. There is a full-time, trained medical librarian with an assistant. This is not exceptional. Moreover, these libraries are used, and they remain open for very long hours. This particular one is housed in the residents’ building and is never actually closed.

A considerable part of the effort being made is devoted to evaluation. We may regard programmed instruction, television and the like as intriguing gimmicks, but the Americans, with their passion for education and for enquiry, are making a determined effort to find out whether they are worth while. Dr. Jason, of the University of Rochester, has even developed a technique for evaluating the teachers. (Jason, 1962).

There are really three quite different things we have to evaluate. The first is the number of people actually reached by our efforts. A recent survey showed that 15 of the 90 medical schools in America were using some programmed materials in their curricula, while 35 were enquiring into their possible role, and these numbers are increasing. (Lysaught, Sherman and William, 1964).

Dr. Woolsey, at Albany Medical College, has organized regular radio conferences with neighbouring community hospitals, and estimates that 57 of these took part last year, the programmes being heard by 2,000 doctors. (Personal communication).

Several American centres are now regularly transmitting medical television programmes. In the New York area, a sampling of the 7,566 internists, paediatricians and general practitioners who could receive four local programmes suggested that 6.7% had watched at least one of them. Counting hospital doctors, it was estimated that 713 practitioners saw at least one of four particular programmes. It may be significant that one-third of them were foreign graduates. (McGuiness, Menzel, Rogers and Bodden, 1964).

The National Educational Television network in the United States could reach 80% of all physicians in the country in 1963 and this number will rise to almost 100% by 1970. The means therefore exist for the implementation of the recommendations of the Joint Study Committee on Continuing Medical Education for the foundation of a “University Without Walls” based on “The organized, sequential curriculum for each field of medicine which would be presented over a nation-wide distribution system, using television on a continuous basis.” (Dryer, 1962).

The second problem is to evaluate the effect of our efforts upon learning. McGuire and her co-workers (1964) tested the ability of a group of physicians to identify 15 heart sounds and murmurs before and after intensive courses in auscultation lasting two or three days. All the group tested showed a significant gain in skill, immediately after the course. However, when tested again six months later, the group achieved the same mean score as they had before the course. Only two of the 18 scored more. The need for frequent practice and repetition is obvious.
Many studies of the effectiveness of programmed texts have now appeared, and the part these have to play in the curriculum is being clearly defined. The most recent study is that by the Cheris's, (1964) of a linear programme in basic physics and diagnostic radiology. Here the programme group performed better than the controls in tests, but took considerably longer to learn the material. The differences were largely due to only one or two of the questions: if these were excluded the results were much the same. This suggests that it is the much more careful organization of the presentation of the material in the programme that accounts for its effectiveness. Perhaps textbooks should be reduced to programmes, evaluated and then re-written.

At the University of Utah, answers given by a group of physicians to multiple-choice questions before and after a series of television seminars on diabetes showed that these had had a significant effect (Castle, 1963). A much more ambitious attempt to evaluate the effect of the New York television programmes is being made by Dr. Menzel of Columbia. A full-time research worker will personally visit a sample of doctors viewing these programmes and invite their co-operation in answering a large number of multiple-choice questions before and after. Americans seem to be surprisingly amenable to this sort of treatment. It is hard to imagine the doctors in the National Health Service being so tolerant, even though we are told that the annual number of interviews conducted by survey groups in this country has now reached two million.

The third and hardest problem is the evaluation of behaviour. George Miller (1936) has said that evaluation begins and ends with the behavioural goal of education, not with the instruments used to measure it or the instruction used to encourage it. We need to show that our efforts lead to a higher quality of medical care: without this they are meaningless. The classical studies of Peterson in North Carolina (1956) showed that this quality did not correlate with the physician's performance as a student, and this has been confirmed by a very recent study from the University of Utah. As long ago as 1935, Youmans showed that a four months resident postgraduate course had little effect on the behaviour of those taking part: seven out of 14 practitioners studied were still keeping no written records of their findings. As Miller remarks, it seems unrealistic to assume that they would profit very greatly by being rapidly informed about the most recent discoveries in any investigator's laboratory. All investigators of this problem have stressed the importance of practical clinical demonstrations, informal discussions and participative methods of teaching, as against a purely didactic approach. It is probable that some of the methods we have been discussing today may prove valuable in this respect. It is possible that television, in particular by its intimate button-holing-you-by-your-own-fireside approach, may succeed in making an impact on some of those 80% who never take part in any postgraduate courses, a figure that seems to be a sort of international constant. We need to devise a method of enquiry capable of testing this possibility.

In conclusion, I submit that we are fortunate in having the vast, wealthy, diverse and ebullient American population carrying out this basic experimental work and evaluation ahead of us. It is our own fault if we do not profit from it.

REFERENCES


DISCUSSION

Chairman: Dr. Geoffrey Templeman; Participants: M. S. Brett (Salisbury), Valerie Graves (Writtle), K. O. Rawlings (Farnborough), J. W. Paulley (Ipswich), D. Ferriman (North Middlesex), M. East (Sandwich), B. Lennox (Glasgow), J. Woodall (St. Paul's Cray), R. Reid (Colchester), H. J. Galbraith (Chelmsford), J. R. Ellis (London), A. Williams (Oxford), E. Gancz (Bexley), A. Herxheimer (London).

Brett: I would like to say how much I appreciate Dr. Paulley's talk, which I wholeheartedly support, and the observations he makes about organisation in a provincial town or city. There is just one question I would like to ask Dr. Graves. How far has he experimented with the tape recorder in making clinical observations in patients' homes as a means of encouraging busy practitioners to make serial observations on patients when in a hurry? It seems to me this is a possible way in which they could contribute to clinical discussions later on, in conjunction with hospital staff.

Valerie Graves: I would say that any form of serial recording made by G.P.s in their own homes must encourage won to take a more active interest in clinical medicine but I would not say that it was the sort of thing that was easy to do. You have to have a reasonable opportunity to do it—it is not awfully easy to do in the home, but I think it is something that can be done and could be encouraged if we would get round to doing it.

Rawlings: Can I ask Dr. Paulley one question—Who pays for his librarian?

Paulley: The Hospital Management Committee.

Ferriman: In our area we put on some meetings to describe research carried out at the hospital and to our amazement we had groups of 70 or 80 people attending of whom 60 were G.P.s. This surprised us very much at first but thinking about it—the reason why postgraduate and continuing education is so frightfully important is because of the extraordinarily rapid advance of medicine due to research, and I think that G.P.s feel that they are participating in this progress of medicine. I wonder whether Dr. Paulley would think that in talking about these postgraduate centres and so on, these should be linked up with research which Regional Boards are supposed to be encouraging.

Paulley: I quite agree—in our new proposed institute we have made special allocation for research rooms with bench space and in fact we know that General Practitioners in our area would value this as well as our own hospital residents who need to do work and cannot just move apparatus about the place.

East: Could I ask Dr. Paulley if he thinks that the G.P.s would benefit in this respect by taking part in well organised (from hospitals possibly), clinical trials as against the pure academic type of such projects.

Paulley: I would answer that quickly by saying that any sort of scientific evaluation is vital whether it be trials of drugs, or not. What one would like to see is that not all evaluations should be drug trials; there is a tendency for this to predominate in general practice at the moment.

Lennox: Two comments. One—I happened to spend the whole of yesterday taking vivas for the primary Fellowship of the Glasgow College. Of 15 people I viva'd only two passed. The rest were almost all sad Indians and West Africans, visitors to this country, hoping for higher degrees. Hardly any of them showed the least evidence that anybody was taking the least trouble to give them any kind of postgraduate instruction. At the risk of stating the obvious, I think at least someone should say that there must be a terrible number of hospitals in this country which accept overseas postgraduate students as junior staff and pay not the smallest jot of attention to their postgraduate needs. Obviously we are hearing today from the people who do, but there is an awful lot of leeway to be made up in the country. The other comment is a little lighter—Dr. Paulley has said that his medical students were never taught to use a library. I would like to put on record a fact about the new Glasgow curriculum. The first cohort have just reached their fourth year, and the principal element of examination during that year is the writing of a 3,000 word dissertation, which must give evidence of having used the library in collecting the necessary material. There was most terrible dismay when I told the students about this three weeks ago but as far as I can gather they are now accepting it with equanimity. It would be very interesting if Dr. Paulley takes any Glasgow graduate three years from now to see whether he notices any difference.

Paulley: I look forward to meeting them.

Valerie Graves: I was only going to say that a lot of these Indians are the people who write to us and ask us for tapes. They see it as the only kind of educational material they can get apart from reading the journals, which they do, but they find that there are too many journals and they do not know how to go around them any more than the people you have been talking about.

Woodall: I thought Dr. Paulley's talk was marvellous, absolutely in line with the best possible. I think. I would like to know his recent experience with clinico-pathological conferences and journal clubs. I imagine that the latter would be very close to his heart.

Paulley: Our experience of C.P.C.'s is not very extensive. We have used the method and I think it is a useful one, but it may develop into a guessing game with the pathologist omniscently owlish behind his spectacles. I am not at all sure that this guessing game is always valuable, although it does provide great fun. But if it were the only method I would say "No" to it. J. W., and we all have a rather unusual one. As you know in most journal clubs one member covers one journal. We felt this produces rather an indigestible meal. Our Journal Club arose to provide a talking point for a group...
at which nurses had previously provided the talking points by their questions. Unfortunately the matron stopped the nurses coming to the meeting so we had to find something else. So, what the group has met for three-quarters of an hour on Wednesday mornings at 12.30 p.m., which is a convenient time, and one paper only is presented, all members taking their turn. It is astonishing how wide a range of material can be covered in a year, and it is so often work you might not read yourself.

The other asset is that it teaches the junior housemen who attend to take a rediculous amount of pages and to use the library, to evaluate, papers, and to present them. Naturally we hope all the teaching hospitals will follow Glasgow's and Newcastle's example and then we shall not have to initiate our residents in the use of a medical library as we do at present. In other words we are carrying on what we hope the teaching hospitals will follow—Glasgow's example and Newcastle's example—we should only be carrying on the process. At the moment we are initiating it I may say.

REID: I would like to say how much I enjoyed my neighbour's and Dr. Paulley's talk. Now I would like to make one observation and ask him a question. Firstly, I happen to be chairman of the Research Committee of the North-East Metropolitan Region and we have in our hospitals a very lively programme of research going on. We have in the last two years, with the help of the teaching hospitals, had three meetings on research. We have asked only the research of the hospitals and we have had 50 to 60 people attending these meetings, which shows that there is a great deal of interest in research. Well, I feel that research should not be limited by any means to those working in hospitals. I would like to hear Dr. Paulley's views of what form perhaps research could take for the General Practitioner.

PAULLEY: I think this is too large a question to answer at this point. I am sorry to duck this one but I think it would take too long to answer it. I think it is a very important point and I am full of admiration for the North-East Metropolitan Board's activity in this field.

GALBRAITH: Although there are none of the speeches today, I would willingly have missed—there is one other this which I was disappointed about. Many of us I think have been discussing today the inception and the development of medical centres (everyone has his own name for them) and we are all having the same problems. I would like to have seen a discussion on the actual construction and the furnishing of these centres. We have seen the demonstrations outside but I think we are all going to face big problems, and perhaps at this stage we ought to get together and hear each other's difficulties. I was wondering whether anyone knows of any organisation which is in fact investigating what is the experience of the few centres already in existence, and secondly if we could individually meet and discuss our problems. I feel otherwise we will spend a lot of money on equipment which we won't want or we won't be sound-proofing and furnishing our centres appropriately.

ELLIS: There are several organisations working on the problem which has just been brought up. One is the Ministry of Health which (even before the 3rd circular went out indicating the thin end of the wedge in the Ministry accepting some financial responsibility for postgraduate training) was collecting a certain amount of evidence from existing centres, which are now of course quite numerous. A further organisation is the Association for the Study of Medical Education which will be holding a meeting, I hope, at the end of January on this very subject, pulling together experience up and down the country in both concrete structure and staff structure, so that we don't, as is at present the case, repeat in some areas mistakes which have been made elsewhere, and so that the better ideas get around the country as a whole. Finally, the Nuffield Provincial Hospital Trust which publishes and funds research, its enterprise is at present conducting a survey not only of the places which they have supported but of others. The survey team of three people—a surgeon, a physician and a senior administrative medical officer—have been going round about five regions so far, and before the end of the year will get to several more. This is bringing together quite a lot of data on this subject which I think will be very useful.

WILLIAMS: Very brief. I wanted to comment on Dr. Paulley's comments on libraries and to say that I agree most strongly with what he said about long opening hours. In fact the Medical Library if at all possible should be open 24 hours a day, 7 days a week, and I would go further than Dr. Paulley and say that in fact you have got to budget for a loss and not be too dismayed if this costs a bit of money. Secondly dealing with his remark about concentrating on journals, in this kind of library I am sure that is the right thing to do but, of course, one must add that in fact people steal journals or mislay them or use them for other purposes. On the question of library assistants, in the Oxford region we have several hospital libraries who employ part-time ladies who are paid mostly out of grants from the Nuffield Trust. In one hospital they try to combine part-time medical library help with part-time hospital library help, and that seems in a way logical but I think perhaps the other way is better if you can use the same person to look after the medical library and to look after the secretarial work of the postgraduate programme. We hope, in Oxford, and this is a hope and not a fact, to develop at the centre of the region a medical library under a professional medically trained librarian (in fact she is already there but the library isn't) who will establish relations with libraries at the peripheral hospitals and have a lot of inter-library cataloguing and lending back and forth, and so reinforce their potential in that way.

GANCZ: I hope I am not going to put the cat among the pigeons. Ipswich appears to be a very active postgraduate centre and I just wonder if they have had any comments passed to somewhat lectures for their junior staff; nursing staff, junior medical staff and, possibly, consultant staff to be given by general practitioners.

PAULLEY: Firstly our idea is that no one lecture anybody else. We all suffer in this country from too much lecturing in our educational system. The General Practitioners have for years presented cases and papers to the Ipswich Clinical Society which was founded in 1889 and its meetings are always well attended by Consultants and junior hospital staff. Secondly I am delighted to report that in the second year of the "Friday Club" we have had two obstetrical symposia put on by general practitioners themselves, chaired by a general practitioner with an invited consultant as a referee. This is only the beginning.
HERXHEIMER: I just wanted to ask how many of the general practitioners in Ipswich used the library compared with the number that attend the Friday meeting, because I think one experience has been unfortunate. I have heard of a Library in Texas which is very munificently endowed which was used by about 2% of the practitioners, and is empty most of the time. I was just wondering whether this should be designed primarily for hospital doctors with G.P.s being, of course, welcome to use it and invited to use it but not designed primarily for them.

PAULLEY: I am sorry to hog this machine but my answer is that still not many of the practitioners who come to the Friday Club are using the Library. We believe that in the long run more will do so, particularly if they start to produce papers for the Friday Club or the Clinical Society they will have to use the Library. When they do, a glance at the Library attendance book always reveals it a week or so before the meeting. But I don't really think the practitioners are going to use or properly appreciate libraries until the Medical Schools start to teach them how to do so, as I have said already.

THE GLASGOW POSTGRADUATE MEDICAL TELEVISION PROGRAMME

DAVID JOHNSTONE
Producer of the Programmes for Scottish Television

These programmes originated in a Glasgow University conference on TV in education, at which it became clear that the desire of Scottish Television (especially of its director, Dr. Noel Stevenson) to see an expansion of educational television chimed with a desire of the Glasgow Postgraduate Medical Board (especially of the Dean, Dr. A. C. Fleming) to find a way of reaching doctors who could not attend ordinary meetings and courses. Fifteen monthly programmes have now been transmitted: they have been much appreciated, and are now being used by more than half the commercial TV companies in the country, and may soon be seen abroad. Though aimed uncompromisingly at doctors, many others listened to them, especially members of the associated professions. They have demonstrated that good specialist television educational programmes can be produced relatively cheaply; the fact that S.T.V. were a commercial company has proved no real obstacle. The necessity of avoiding peak viewing hours was a disadvantage, but there is no ultimate solution apart from the opening of a new educational TV channel.

THE GLASGOW POSTGRADUATE MEDICAL TELEVISION SERIES: PRODUCTION PROBLEMS ON THE MEDICAL SIDE

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Knowing that conferences on medical education have a sad reputation for consisting mainly of long dull lectures on the necessity of not giving long dull lectures, I resolved to stick to a strictly practical account of some aspects of the work of the medical production committee for the Glasgow series. Today's conference has, of course, not deserved that reputation, but I propose to hold to concrete description nevertheless. Though our own programmes have not reached Kent yet, B.B.C. 2's version will soon be here. Even for those with no prospect of taking part, it adds to the interest of watching such a programme if you know something of the problems involved.

I want first to expand a point already touched on by David Johnstone. These programmes
A. A. Lewis

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