TISH MEDICAL JOURNAL VOLUME 285 18 SEPTEMBER 1982

Mandatory Training

Basic medical education is not sufficient to prepare a doctor to become a consultant or a pinicipal in general precise. Thus, it has been accepted by the medical profession that to practice independently in any discipline of medicine requires a prelimi-nary period of postgraduate training. From 15 August 1982 co doctor will be allowed to become a principal in general practice unless he of the has first completed a three-year programme of vocational training after full registration. Unlike the hospital general practice is required by law. It has been agreed that standards of training should be under the control and supervision of the profession. The decision taken in general practice that a system of training, which began on a voluntary basis, should be under the control and supervision. The decision taken in general practice that a system of training, which began on a voluntary basis, should be underdifferent of the decide. Many observed the standards of training and the decide. Many observed the science of the profession of the decide of medical elucation. This article sets qut the main historical events leading to the decision togs for mandatory rather than voluntary training for general practice.

Background General practice has always embraced many styles of medicine, reflecting different interpretations of the content of the discipline and therefore of the clinical services that practitioners should provide for their patients. These differences in content and style have resulted in wide differences in the standards of care. Standards at the lower end of the spectrum are thought by many to be unacceptable, while at their beat they are a very In the early 1990b it was obvious that general precise was in decline. Moral earnog established precisioners was poor, emigration was rising, and medical students were quickly losing

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The case in favour

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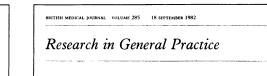
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# Problems in doing operational research

M G F CROWE

This is an account of the problems encountered in doing a small research project that was published in the *BMT* in 1976.<sup>1</sup> It attempts to describe why, what, how, when, where, and "was it worth the effort." Some of the discouraging episodes are quoted in some detail to alert fellow travellers. The quotes are taken from a bulky file relating to the project that has been maturing in a trunk in the attic for the past six years.

# Why did we start?

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Why did we start? The stimulus that led to our partnership of three, in semi-trarl Leicestershire, recording all our our-of-hours calls for a year was a combination of four influences. Firstly, the practice have a start of the start of the start of the start interpret our start of the start of the start of the start to prepare ourselves for teaching medical students. We fail we needed a reliable aid en emoir teaching all of the "out-of-hours" work. Secondly, the partner who lived closest to the health centre had the impression that he was dealing with more of the out-of-hours emergencies than the other two partners, who lived two and eight miles way. Thirdly, we had been im-pressed, while sitting on medical service committee cases, of the need for keeping good records of all the out-of-hours telephone calls, visits done, and action taken. Lastly, as we were about to start recording, the summary of deputsing services in Sheffield was published. This article high-lighted the dearth of informa-tion on "out-of-hours" activity being done by the practices that did not employ deputsing services.

### What did we record?

What did we record? Having worked as a locum for the Leicester deputising service, I feit that we should record the same details that the deputising service recorded for accurate comparability. Inevitably, this meant noing the GP on duty, the patient's name and address, age, see, and marital state; the time and dates of the call; the day of the state of the dates of use of the call; the day of the state of the dates of the trype of call using the Royal College of General Practitioner'. Classification of Morbidity (1963). We subdivided the classification down to the same 14 broad headings that the Sheffield team had used. As it was to be a prospective study, we first tested the practica-splitty of collecting all this information consistently by having a policity. The page were already ruled horizonality and vertically in a useful way. We detailed the way in which the

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columns were to be used in the front of the book and explained the recommended abbreviations—for example, E for emergency: go at once; U for urgent, but can probably wail for up to two hours; A for advice on the phone only. We started recording on 1 April 1973 and found that everyone was quickly abb to enter the relevant information. Occasionally part of the name or the ago or the distance travelled was omitted, but these omissions were easily corrected later. When 1 say their finnile were housed hour down of the distance travelled was omitted, but these omissions were easily corrected later. When 1 say their finnile who moghth above chosed ow and but members of when the doctor was already out on a call—a frequent occurrence at busy times.

their limits: who might have to note down the details of the call when the doctor was already our on a call—a frequent occurrence in July 1973. I started to explore the different ways that we might use to analyse the data, and I wrote to the RCGP Re-search Unit at Birmingham. Dr Pinsent sent a useful, but rather discouraging reply. The good news was that he felt "there is a real need for hard data about this," but the bad news was "speople in this situation have been known to drown in their own data. If you permute and combine 15 - 250 items you will have some idea of the depth of water in which you are already swimming. It might be useful to go through your list of observations, to limit startarity and the set were known to drown in their own data. If you permute and combine 15 - 250 items you will have some idea of the depth of water in which you are already swimming. It might be useful to go through your list of observations, to limit alternatives, and which contain unequivocal alternatives for at least some of the thing you can ronduc links which are you stready hold, you will see what 1 mean. I really do feel that the next stage must be one of preparation for mechanical analy-sis." He also suggested that we contact Mits Hammond, the RCGP librarian, for reference lists to published work and for photocopies of papers that we might not have access to.

#### Which reference?

We must have been somewhat downcast by this letter for it was not till June 1975 that the correspondence resumed with a letter from Miss Hammond enclosing the list of references. Out of the 29 tiles, only seven seemed to be relevant to our study and these were obtained and summarised. Definitions varied considerably, which put a different emphasis on the results. It quickly became clear that the statement in the Sheffield study that "very little is known about how primary medical care is being delivered out-of-hours" was stull true.

### What finance?

We had by now collected data for two years and to produce results that could be compared with the Sheffield study we would need to use computer technology. This might prove expensive, so we sought the advice of the research expert in Trent Region, DF B Williams. He had also been one of the authors of the Shef-field study, so he was an ideal choice. Regional research funds for projects based in general practice were available on submission

Background

782 a substantial minority of young doctors who failed (or did not want) to understand the need for training. Perhaps they still saw general prestice as the soft option in medicine, carrying limited responsibility and therefore requiring little effort to prepare for practice or perhaps they simply wanted to earn a principal's income immediately after full registration, which was very easy to do at that time. Whatever the reasons, good doctors, especially volunter vocational trainee, tended to join doctors, to do at that time. Whatever the reasons, to do doctors, to do at that time. Whatever the reasons, good doctors, to do at that time. Whatever the free tenders doctors, to om may of whom had a different and lower level of motivation, continued to join practices most in need of improvement, so that two quite different forms of general practice' began to crystallise.

Why mandatory? The late 1970s the profession had to face up to this increas-ingly unsatifactory situation. Given time, some said, a single standard of entry would be established. Others thought differently, increase the standard standard standard standard principals with scant or no preparation. The route followed by lished general practitioners did not a accept the membership caratingtic and so would not allow the college to insist on training as a precondition of becoming a principal. Indicative specialist registration through the General Medical Council, recommended by the Merrison Committee' would have been another option. Informed people, howver, recognised that in reality specialist registration thus judged that so long as woccinnal training remained voluntary within the independent contractor system here would be essentially two standards of entry into general practice and that therefore the gap between good and bad general practice would wide training would have to become mandatory for doctors who whade to become principals in gray of controlling entry either were not available or not ways of controlling entry either were not available or not server between the Network in the server of a source principals in gray of controlling entry either were not available or not ways of controlling entry either were not available or not server bar of the Network in the server of a source principals in gray of controlling entry either were not available or not server bar of the Network in the server of available or not server principals in principals.

# Hospital and general practice compared

Hospital and general practice compared In hospital specialities, be reponsibility for setting minimum of the setting of the setting minimum of the setting required usually includes a general clinical period up to registrar level, followed by higher training in the senior registrar grade. Assessment is normally done by a combination of examination and the supervising consultant commenting on clinical per-formance. The royal colleges and faculties and the joint higher than set definitive sandards. Thinking provide the set of the by the NHS and is under the general supervision of the regional postgraduate medical committees and their speciality sub-commutes. When training exponenting the approximates NHS appointment committees. These appointment committees normally follow the training requirements the appointment of 1974 the council of the RCGP introduced is Postgraduate Training Committee for General Practice, which included prepresentatives of the profession (the General Mexical Services Committee) and the universities (regional adjecting downittee for General Practice, which included persentatives of the profession (the General Mexical Services Committee) and the universities (regional adjecting downittee for General Practice, which included presentatives of the profession (the General Mexical Services Committee) and the universities (regional adjecting downittee for General Practice, which included presentatives of the profession (the General Mexical Services Committee) and the universities (regional adjections and postgraduate derow). It was thus analogous to the joint

and postgraduate deans). It was thus analogous to the joint higher training committees in other specialties. In 1975 this

PRACTICE OBSERVED

interest in general practice as a career. Because there were no minimum standards of entry into general practice too many general practicinoent were prepared to welcome anyone as a new partner regardless of the person's medical competence. Similarly, the executive councils (and the family practitioner committee exercised no effective control over standards of entry since no training was required for admission to the medical the standards of the standards of the structural rebuilding Nevertheless, it did not tacket the problem of training—or tather the lack of it—and thus of widely varying standards of every of the standards of the structural rebuilding and the standards of the structural rebuilding and the standards of the structural rebuilding of general practice and was an essential prequestion. These shills which could be tanght and kernt.' These shills were not being august as part of basis medical deuction. Indeed, needial schools had for years almost totally neglected tacking about general practice, and in England (though not in Scotland the 1970s were, with a few notice correct the deficiency in the precession or was it intended to. It was antirely logical, the stores, the RCOP and the General Medical Education's backed by the RCOP and the General Medical Education's based by propose that general practitioners, like specialists, thould propose that general practitioners in some parts; the bay store y sub-type based by the some solutioners of the former specialists, thous based to prove the general practitioners of interest to the store any store that general practitioners of interest to special practice as a tareer, and schemes soon muchoned as the more momentum of the new training more metal stories depict whis, and was partly responsibility motivet dense of interest to spementum. The introduction of vocational training coincided wi

# BRITISH MEDICAL JOURNAL VOLUME 285 18 SEPTEMBER 1982

BRITISH MEDICAL JOURNAL VOLUME 255 18 SEPTEMER 1982 committee became fully independent and was renamed the foint Committee on Postgradust Training for General Practice (JCPTGP). The JCPTGP is no more or less independent than the joint higher training committees that supervise and, in Housed at the Royal College of Grneral Practitioners and serviced by the college, the JCPTGP is of the profession. Most of the members are appointed in equal numbers by the RCGP and the General Medical Services Committee. Other members represent trainees, regional advisers in general practice, the armed Forces, regional postgraduate deans, clinical tutors, and the Association of University Teachers in General Practice. The councils for postgraduate teams, and the hough departments in aid from Government, as is the case with the joint higher The Celfford was charged with supersities standards of

In aid from Government, as is the case with the joint higher training committees. The JCPTCIP was charged with supervising standards of training in general practice. Later, when the decision to introduce mandatory vocational training was put into effect, the JCPTCP also became the certificating body responsible for seeing that the NHS Vocational Training Regulations were implemented as the profession and Parliament had intended. The JCPTCP' scrifticate is required as one condition of entry to the medical list. Training posts are provided by the NHS: the arrangements for training are the responsibility of the regional advisers in general practice acting on behalf of the general practice schemmed, from song those eligible for inclusion on a medical list, by partners or, in the case of single-handed vaeancies, by the Medical Practices Committee on the recom-mendation of the family practitioner committee.

### Was it worth while?

Was it worth while? Many doctors feared that the introduction of mandatory focational transing would result in the loss of independence to the second second second second second second to the second second second second second second the content of and the standards for training. In addition, the memory of the CPT CPT is not second second

I acknowledge the advice and help of Dr D H Irvine in preparing this paper and the practice secretarial staff, particularly Miss Julie Simms.

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Commission on Medical Education. Report: Crited 1996 London: HMA0: 1996
Commission on Medical Education (1996) Report: 1998 Distance one, Wertennes Report: Crited 1996 London: HMA05, 1975.

to the appropriate committee. Allocations, however, were made only once a year, and we had just missed a meeting. He felt that, with a small project like ours, he local university department of community health should be able to contain the cost in their own research budget. He davised us to prepare a suitable protocol and apply for permission. Small is a relative term: in the first year we had nearly 1000 patient contacts.

### What method?

What method? Dr Finsterly forecast was already proving true. There were far too many data for manual or simple mechanical analysis, and we needed guidance on what computer method might be appropriate. Before submitting our protocol 1 went to see the head of the Leicester University computer department, Mr Fisher, and literally liad my cards on the table. He thought that the Fortran coding card system would be best and was most help-ful in showing me how the data could be reduced to a numbered code with 10 variables for any one item. If movel agent the data of the weak of the state of the state of the data type up the cards ready for electronic sorting. The ease with which a very wide range of comparisons could be made was most impressive, and it required some discipline to limit ourselves to the sort of answers we required for the project.

### What protocol?

What protocol? The discussed the project informally with the newly formed performed of Community Health on several occasions, and by the submitted the formal protocol in May 1975 had con-served all the collected data on the coding forms myself. This protocol is a submitted the formal protocol in May 1975 had con-served all the collected data on the coding forms myself. This protocol is a second method of the second method is an the protocol you acked me to produce when we last met." Protocol Marineer replied promptly. "Thank you for letting me target the additional material on this study. I think this is a useful target the second method is the study. Think we be protocol with hindsplat, that I must have been developing mell Aquest to reply. Impactnet comments such as "...," the second second second method is a first the second second second mell Aquest to reply. Impactnet comments when as "...," the second second second second second second second second the first paragraph. Of Dr B Williams's study. ... and this such as accepted for publication in the BMJ's I feel a little paragraph out that you should be suggesting another approach. "The cost second second second second second second second second method with the computer department," "Pleave help used such the used second second second second second second the first paragraph. Of Dr B Williams's second second second method with the computer department, "Pleave help used the second second second second second second second second the second second second second second second second second the second second second second second second second second the second second second second second second second second the second second second second second second second second the second second second second second second second second the second second second second second second second second the second second second second second second second second second the second t

# How were the data processed?

How were the data processed? In the weeks before submitting the protocol I had been slowly working through the records of the first year. Missing informa-tion had to be extracted from the patient's record file when possible. Then the consistency of the entries had to be checked, such as "Advice given" when the doctor had clearly wisited the patient at home and should have put U. I then had to translate all the data on to the Fortran Coding Forms. This was done at the end of the normal working day, when there was nothing worth watching on the television. The conversion became much easier with practice. Two examples may be helpful:

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Column 17 dealt with age groups—Age	Code
0-14	1
15-44	2
45-64	3
65 plus	4
Columns 27 and 28 dealt with the month-	
January - 01 June - 06 December	= 12
Having coded all the entries, several spot che	cks were made,
but no errors were detected.	,

How the computer print-out was analysed

How the computer print-out was analysed The data ware processed by the computer department on 8 October 1975. At the bottom of the concertina-like print-out there is the following information: "Number of transfers 7456 Total mill time used 113 secs Maximum core used 61 thousand Computing units used 109.9 Normal end of job, 38 control cards were processed. 0 errors were detected." Unless you are used to this sort of language it takes a little special to the sort of anguage it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the sort of language it takes a little special to the minimum number of comparisons to answer the questions that we wanted to pose required 92 pages of print-out.

# How to write the article?

How to write the article on deputsing services and the BMJ's notes for those writing articles, I did three rough drafts of the article before it was ready for expert comment. A letter in January 1976 from Professor Marinker was most helpful, and all the suggested amendments were acted on. The tables and figures needed to be better, with clear labelling. He offered the services of the department: "We have the facility for doing a very pro-fessional job on this." He also suggested that we submit the article to the formand of the Royal College of General Practitioners, but we all felt that we should try the BMJ first to try to reach the same readership as the Sheffield study three years earlier. We were delighted when a final draft was accepted for publication."

# Was it worth the effort?

Was it worth the effort? We achieved all four objectives. The record has continued, and we are now in our tenth year. It is a valuable teaching aut, and the record is there in case we are ever called before a midcal service committee. The partner living furthest from the centre was receiving only 3<sup>-1</sup>, ever calls than the partner at the centre, but he was overcompensating for distance by doing more home visits. We provided some of the massing information asked for by the Sheffield study. We wanted to know the answers to the questions we were asking. No one else knew. I think that you need that sort of spur to overcome the furstrations along the way and somehow find the ture, out of your valuable free time, to log through the mass of data. To use DP linens's analogy, it is worth learning to sym before attempting a rather ambitious project like ours.

I thank my wife; my partners; Dr R Pinsent; Professor M Marinker; and Mr Fisher of the computer department, University of Leicester.

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