

who sat the examination have only recollections to support my argument. Such controversial methods of examination should be open to the closest scrutiny by all concerned, including the general public, who are ultimately affected by them. I am perturbed that an institution, with the high ideals of the Royal College of General Practitioners, should sully its hands, even temporarily, with an instrument of examination, which by necessity carries within it, the seeds of its own eventual disrepute. The mere fact that other Colleges have embarked upon this clandestine method of examination is no great recommendation to us to emulate them in their monumental folly and disregard of human rights.

In conclusion, let me say that I attack only the method of this particular part of the examination. I have only respect for the examiners, who throughout the proceedings, exhibited the highest possible standards of courtesy and must have laboured unceasingly to compensate for the shortcomings of this particular part of the system.

Glasgow

DUNCAN McNICOL

We have shown Dr McNicol's letter to the Chairman of the Board of Censors who has made this comment:

Dr McNicol raises several points, some of which, in all fairness, deserve an answer, albeit in more moderate terms than those in which they are made. Yet the greater significance lies in what he did not say rather than in what he said. There is demonstrated an unawareness of the purpose and function of the examination as a whole, which represents a lack of communication between the Board of Censors and candidates. For this, as chairman of the board, I must accept responsibility and I propose to attempt some clarification.

Our examination seeks to assess candidates in the areas of the knowledge, or better—factual recall, skills and attitudes appropriate to general practice. The different portions of the examination are each calculated to assess certain aspects only. It is also implicit that the several portions should be fair, relevant, discriminating and reliable tests. The multiple choice question paper, as we use it, seeks to measure factual recall in a variety of areas. These are set out in the report of the Conference of Examinations^{3, 4}. It thus forms only one of the four portions of the examination. While

in his ultimate sentence, Dr McNicol mentions that there are other parts of the examination, his readers could be forgiven the assumption, until they reached this sentence, that the whole examination was under attack.

The difficulties of the MCQ lie mainly in construction and validation. The techniques of construction are well described by various authors and two works in particular^{1, 2} could be consulted for details. We rely on the 'one-out-of-five' type of answer because:

1. Experience has shown it to be a simple and reliable method.

2. The candidate is spared the extra stress of interpreting the varying, and sometimes difficult, instructions which must precede each change of type of question.

It is the task of the examiners to create a 'bank' of questions, each one of which has been validated. The process of validation is as follows:

First, and perhaps the most difficult, the questions are formulated within the rules for construction referred to above. The most recent and authoritative sources are used.

Secondly, the questions are reviewed by a small group of the examiners, and any questions producing immediate disagreement are modified until agreed, or rejected forthwith.

Thirdly, the paper is 'sat' by a group of volunteers, and the papers are machine marked. This enables the examiners to determine the level of discrimination of the examination.

The detailed analysis provided of each question enables yet more to be rejected or modified.

Lastly, a minimum pass mark for this portion of the examination is set.

In the case of the last MCQ paper these steps had been taken and the original paper of 220 questions was sat by 60 volunteers—all teachers in general practice. From this paper, as a result of the question analysis, 24 questions were rejected and four new ones added, bringing the paper up to 200 questions, for which the time of two hours had been demonstrated by the volunteers to be adequate.

After the college examination to which Dr McNicol refers, some 60 questions, of which only a few were shown to have been undesirable by this further analysis, have been removed and the paper for the May examination will be of 220 questions, chosen to demand, as near as is possible, an equal level of answer.

Thus, in the MCQ papers the great labour is in creating the questions. It is at this time that the highest qualities of human judgment are

required. The machine marking is uniformly fair for all and without observer bias of any kind.

The deduction of marks for wrong answers is to prevent guessing when, in theory at least, a candidate might with luck score higher than he deserved. A simple mathematical formula for deduction is accepted practice and is built into the computer programme. In practice, the deduction of marks for wrong answers produces two chief results in addition to fulfilling the objective of discouraging guessing. The first is predictably to lower the error-adjusted score. In our last examination, the average of scores which had been adjusted for error was about seven per cent lower than the average unadjusted score. The second is that the ranking order of candidates is usually not significantly different with either method of scoring. This might indicate that not a great deal of guessing goes on. In effect then, the method of scoring adopted means merely that the minimum pass mark is set at a lower level.

Now to take up some points from the letter. The title of the paper 'Multiple choice' is true, in that for each question the candidate may make any one of six choices, i.e. mark any one or none of the five possible answers. It might also be appreciated that the fact that one does not agree with any offered option not infrequently means that one does not know the answer. The questions are not compulsory in the sense that any may not be attempted—*vide* pass marks.

In developing such a type of examination we have sought to learn from the experience of others through correspondence, discussions, attendance at courses, our organization of a conference with other Royal Colleges on Methods of Examinations,³ and meetings and conferences of the examiners themselves.⁴

There were only a few bad questions revealed by analysis in the examination, which Dr McNicol sat, and he rightly referred to one or two of them. They were there despite the care in screening and validation. They have been removed and will not be used again. Yet they make no difference to the results. In the 'volunteer' situation the average overall score was 60 per cent. In the actual examination, which by its nature is, as Dr McNicol points out, likely to be more stressful, the average overall score was 57 per cent, including those who failed. The pass rate (overall scores) was 56 per cent.

An emotive plea is made by Dr McNicol for

the older candidate. The Royal College of General Practitioners is not seeking to admit only older candidates, who, after all, enjoyed the possibility of membership without examination for 15 years. It must welcome youth. It might be acknowledged that all universities, and most medical schools, make an increasing use of the MCQ paper for testing factual recall, so that younger candidates are becoming increasingly familiar with the method. We consider that the method we have adopted is the fairest and least stressful. One of our volunteer candidates, 39 years from graduation, scored 58 per cent on his first ever MCQ paper. We do not believe that there should be either different standards nor, in any other than truly exceptional circumstances, different methods for any group of candidates.

And now the vexing question of 'publication'. At the present time our 'bank' of validated questions is too small. Most examining bodies, be they colleges or medical schools, like to have a 'bank' of about 1,500 to 2,000 questions. All these questions must be continually under review as changes in medicine rapidly render some unsuitable. The considerable labour of construction cannot be lightly dissipated. For my own part, I would feel that if a candidate can memorize the whole of a 'bank' of questions he well deserves to pass.

Much work is being carried out to introduce centrally banks of questions which may be used by many different examining bodies. The Royal College of General Practitioners will have both a contribution to make and advantages to receive from co-operation in such efforts. For the present we do not propose to publish our MCQS.

It would be wise to lay some emphasis on the importance of the developments made in the other portions of the examination. The 'modified essay question' tests skills and attitudes with less emphasis on factual recall. The skills concerned are those of the definition and solution of patients' problems. This method is becoming an elegant test highly relevant to general practice. The oral examination is concerned in one portion to demonstrate a particular relevance to the candidate's own, rather than to conceptual, practice; while in the other portion, the questions will deal mainly with patients and the candidate's ways of handling their problems.

In terms of the 'weight' given to the examina-

tion as a whole, the MCQ paper represents only a quarter. We have collected much evidence to show that the examination as it is being developed is fair, of a high standard and relevant to general practice. We intend to continue improving and developing it. We do not intend to abandon the MCQ paper.

It must be said that Dr McNicol successfully sat the examination to which he refers. My congratulations to him are the more fulsome and sincere in that he coped so well with what he apparently found new and abhorrent. But perhaps that is what we all feel about examinations when we are sitting them.

I should say that the Board of Censors will be pleased to receive questions from any who care to send them to us. It is a college examination in which we are representatives who administer the examination. Suggested questions may be of any type, essay or MCQ, but if the latter, 'one-out-of-five' please. They will all be read and considered, even those humorous ones we from time to time receive.

Manchester

P. S. BYRNE.

REFERENCES

1. *Teaching and learning in medical school*. Ed. George Miller *et al.* Harvard University Press.
2. W.H.O. Publication. 'Medical Exams.'
3. Report of Conference on Examinations, London. R.C.P. November 1968. *Journal of the Royal College of General Practitioners*, (1970) 19, 44.
4. Report of Conference on Examinations, London, 1970. *Journal of the Royal College of General Practitioners*, 19, 240.

The green paper

Sir,

In the correspondence column of *The Journal of Royal College of General Practitioners* 1970, 19, 239, Dr T. Smallhorn refers to the confidence of medical records and states "that we are being pushed into a system in which confidence is lacking, because the integrity of records is absent, and that we shall be forced to share our opinions with people who have a purely economic and social attitude towards the individual".

I have an Upjohn Travelling Fellowship to study medical records and my researches have shown me that as partnerships increase in size, as more ancillary help is employed by practices, and as health centres increase in number, so we must be even more alert than we have been in the past to maintain the confidence of medical records, and the practi-

tioners I have met have not been unaware of this.

In the *British medical journal* 1970, 2, supplement p. 95, the General Medical Services Committee state that "doctors are to be advised that before disclosing information about their patients to a social work department, the patient's consent should be obtained in writing".

I have found doctors have various techniques for recording confidential information so that it can remain so, and certainly as the computer is used more for recording medical data the problem will become greater. The profession, however, is alive to this matter and, I believe, will guard and keep confidential information as such.

Worcester

A. J. LAIDLAW.

Sir,

I was pleased to see the letter from Dr T. Smallhorn in your April edition of the *Journal*. He has touched on a vital issue. The increasing tendency for doctors—and particularly general practitioners—to be engrossed in clinical problems, practice organisation problems, continuing education problems and economic problems, has led to a diminution in concern for the maintenance of the highest ethical standards. Economic and social forces frequently run counter to established medical ethics. The Royal College of General Practitioners must look beyond the Green Paper and its implications, and undertake a realistic assessment of the validity of established medical ethics.

London N.W.6

S. E. ELLISON

Oral ulceration in general practice

Sir,

In his interesting review article on oral ulceration in general practice (*Journal of the Royal College of General Practitioners*, 1970, 19, 191) Dr E. C. Fox states that the prevalence of oral ulcerations in the population is fairly high and it is probably higher than is generally realized. However, he gives no figure to support this statement.

In 1966 I carried out a pilot study of the incidence of certain conditions and symptoms in 104 randomly selected 14-year olds. Mothers reported the occurrence of mouth ulcers in 24 per cent. Although these children had an