COLLEGE EXAMINATION

The MRCGP examination and its methods. IV: MEQ paper

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THE modified essay question (MEQ) is an original College development of the patient-management questionnaire format widely used in undergraduate and postgraduate medical education, both in the United Kingdom and overseas.

The MEQ paper is presented in the form of a booklet. Each page presents a separate problem which must be responded to before turning over. Further information is divulged and new problems posed as the case develops. Thus the dimension of time can be built in and this important factor in general practice emphasized.

It is possible to simulate the clinical sequence of decision-making in actual consultations. Unlike the MCQ and the Australian PMP (patient management problems), cues are not used. This open-ended approach allows the exploration of two areas affecting the candidate's clinical decision-making: recall of clinical and behavioural patterns; sensitivity to the constraints of time, and to the modifying influences of emotional, social and cultural factors in patient and doctor.

When constructing an MEQ a compromise has to be reached at each sequential, decision-making point. If the question is too open-ended, the candidate's sensitivity and selectivity become buried in a 'blunderbuss' offering that often bears little relation to practice.

If the question is too circumscribed, it does not allow sufficient exploration of the candidate's range of clinical thinking. For example the question: 'A 15-year-old girl reports to you with 3 months dysmenorrhoea', might be followed by any of the following requests to the candidate:

1. 'Outline briefly how you would handle the situation.'
2. 'What is the single most likely hidden motivation underlying the patient's complaint?'
3. 'Enumerate in order of probability those four diagnostic possibilities that would guide your further questions.'

The range of answers to the third is likely to give the examiners the best insight into the candidate's clinical thinking, sensitivity and selectivity in dealing with this common primary care problem. Nine or 10 such questions can be used to assess the candidate's ability to collect, select and use data to make appropriate decisions in the sequential situations of the consultation.

The MEQ has been used to test skills of: information gathering via history-taking, examination, and the use of investigations and procedures; hypothesis formation and testing; evaluation of collected data; definition of the problems posed in physical, psychological and social terms; decision-making; recording and communication with colleagues, patients and relatives; preparation of plans for management and therapy; selection of appropriate treatment; understanding the problems of compliance; organization and mobilization of practice and the resources of the community; provision of continuing care and follow-up; and anticipation of future problems.

Constructing the question paper and the marking schedule is a time-consuming task which involves the MEQ group coordinator, a nucleus group of examiners, cells of four MEQ group members and either the entire Panel of Examiners or the increasingly numerous MEQ group itself. A topic area is chosen to ensure appropri-

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ate cover in sequential examinations. Members of the group submit outline papers; the nucleus group edit the chosen paper and circulate it to the entire Panel who complete it as though they were candidates. The examiners' scripts are returned and the individual questions then become the responsibility of cells of MEQ group members who construct and weight the marking schedule. Final editing is undertaken at a meeting of representatives of each of the cells. The marking schedule to each paper is the product of the views of the Panel of Examiners and the content validity is therefore high.

Marking is the responsibility of the four members of each cell responsible for the construction of that question and each script is marked independently by two examiners. A computer printout similar to that for the TEQ consistently demonstrates the high reliability of the marking method. The two main disadvantages of the MEQ format are that the candidates may gain some advantage by reading through the paper before they begin and that they may answer the question in terms of what they believe the examiner wishes to hear rather than what they would actually do. The first disadvantage is diminished by careful construction of the paper and by instruction and supervision of candidates. The second cannot be controlled. Figure 1 shows a modified essay question accompanied by the answers of a candidate who obtained high marks.

Figure 1. *Examples of a modified essay question and answers (continued on pp. 806, 807 and 808).*

Question 1

● Jenny Parks is 28 years old and her husband Robert is a year older. She works as a primary school teacher and he is sales director to an international computer company. They have been married for seven years and live in their own four-bedroomed detached house. They moved to the area of your practice two years ago and have no children. Your first contact with Mrs Parks is when she comes to see you in an evening surgery. She tells you that she stopped contraception 10 months ago and that she has not yet become pregnant. She asks you if anything should be done about it at this stage.

a) List the items of information you need to know before you answer her question.

Answer

Contraception previously used
Oral contraception?—How long?
Any problems—IUCD, OC, amenorrhoea?

Menstrual history
Menarche?
Regular—pre- and post-contraception?
Any menstrual problems—amenorrhoea—severe dysmenorrhoea?

Gynaecological/obstetric history
Previous conceptions/abortion?
Pelvic inflammation—recurrent discharge?
Operations?

Family history/past history
Diabetes?
Major illnesses/trauma?
Heart disease?

Sexual history
Any problems? Satisfactory SI?
Timing of SI with relation to fertile times of cycle?

Husband history
Previously fathered child?
Genital problems: mumps; testicular operations; trauma?

b) What explanation would you give about the general management of failure to conceive?

Answer

Reasons for failure to conceive
Often unknown

A third of problems with female; can investigate initially in general practice but probably need gynaecologist referral and minor investigatory operations.

A third of problems with male, therefore must see husband and take history and examine him and investigate (sperm count).

A third of problems with both partners: ignorance/misunderstanding; fertile time in month and SI; cooperation/unsatisfactory SI.

Not unusual 10/12 months after stopping oral contraception—if this is the case, likely to resolve spontaneously: probably shouldn't investigate until approximately one year normal SI at correct time of cycle. Stress may be important factor in 'failure to conceive', particularly the stress of not conceiving therefore reassure able to help and hopefully successful outcome, i.e. pregnancy.

General management
Start with simple tests, for example, temperature chart, sperm count, first in practice involving both her and her husband and if necessary refer.

Offer support and opportunity to discuss worries/fears/problems.

Question 2

● Some weeks later you are consulted by Robert Parks, who is complaining of tiredness all the time. When given the chance, he tells you he has difficulties with sexual intercourse, although Jenny had previously denied this to you. It becomes apparent that he is unaware of his wife's consultation with you.

What difficulties does his ignorance about her previous consultation pose for you?

Answer

Must be careful in discussion with him not to disclose consultation/details of it—patient confidentiality.

Suggests marital difficulties which may need to be explored and help given to resolve.

Is his tiredness related to this marital problem or sexual problem?

Difficulties with problem of 'failure to conceive' in Jenny: does he want children, have they discussed the 'problem'; sexual difficulties causing problems with failure to conceive?

Would like to see both partners to discuss problems: how could you broach this subject if he is unaware of her attendance?

Is sexual difficulty manifestion of underlying marital difficulty?

Question 3

● Three months later Jenny comes to see you and is pregnant. You have been unable to see the Parks together at any time. She says that she and her husband are delighted with this pregnancy.

When you see her in the antenatal clinic she tells you for the first time about two earlier pregnancies that were terminated in the first trimester as a private patient. She had had these before she ever met her husband and she tells you not to tell him or anyone else about them.

What are the implications of this request?

Answer

Guilt about previous pregnancies and father(s).

Marital tension persisting (as evidenced by previous consultations) and she is obviously unable to talk about this with her husband.

If you disclose details she may be difficult; litigation?

Would be necessary/advisable to disclose this information to booking obstetric consultant: increased risk incompetent cervix; miscarriage; increased risk pelvic infection.

Patient worried due to lack of confidentiality in consultation, previous experiences?

If information not disclosed to specialist colleague: less than ideal antenatal care. What is rhesus isoimmunization state? Were there associated malformations in fetuses or 'social' reasons for abortion?

Question 4

● The pregnancy ends in miscarriage at 20 weeks.

Two years later she gives birth at full term to a normal boy weighing 3.6 kg. The baby, Jack, is breast fed and progresses well. Jenny seems to be coping satisfactorily. One morning, when he is about five months old, she brings Jack to see you. 'He has never been very good at night', she says, 'but during the last three nights he has become impossible.' She tells you she 'can't take any more' and asks you for something to settle him at night.

What might be the reasons for this consultation?

Answer

Genuine worry about the child: poor sleeping, difficult behaviour, physical health?

Worry about her own 'mental' state: likely to harm Jack?

Drawing attention to difficulties at home: continuing marital/sexual difficulties, husband away, therefore having to look after Jack alone; lonely?

Her lack of sleep caused by disturbances from child putting additional strain on already difficult family situation.

Therefore: 'Somebody help me; I can't cope any more'.

Question 5

● You are unable to discover at this consultation any clear explanation for Jack's failure to sleep.

What options do you have for management of the problem? Give the advantages and disadvantages of each.

Answer

Full examination of child

Advantages: reassure mother and check nothing abnormal physically.

Disadvantages: none obvious.

Discussion with Jenny of problem

Discuss Jack's sleeping as it relates to her and her husband: allow her to express emotions, fears, worries, 'can't cope'.

Explain not abnormal for children to require less sleep than parents think they do (or they themselves need); not harming baby.

Help is available.

Advantages: helps reassure mother, allows for release of tensions and worries. May help you find out more about the nature of other problems.

Disadvantages: nil obvious—mother may not be very receptive to this and probably need future discussion.

Prescribe sedative for child

Explain that only to be used for short period of time (couple of weeks) to enable mother to get some sleep and recover her strength to cope with situation.

Advantages: what patient wanted (at least overtly) therefore good patient-doctor relationship. Small dose of Phenergan nocte for short period not harmful to child and help defuse situation and allow mother to recover

Disadvantages: maternal dependence on child having medication; child's dependence on medication.

Sedative/anxiolytic for mother

Advantages: help her relax and cope with situation better.

Disadvantages: dependency risk; suicide risk (prescribe small amount of low potency drug); only stop-gap treatment—not at root of problem; sedate mother—increase risk to child by neglect, abuse, injury; depression of breast milk secretion and drug in milk to infant.

Follow-up

Review situation within one week, ask health visitor to call in the meantime.

Advantages: reassess situation; offering help to mother.

Disadvantages: Mother may fail to come (therefore health visitor visit).

Figure 1. *continued*

Question 6

● When Jack is eight months old Jenny telephones you one evening at 10 p.m. and tells you that Jack is twitching all over and that she is unable to wake him up. You decide to make a home visit straight away. When you arrive Jack is drowsy and in his mother's arms.

Outline the steps you regard as essential in managing this episode.

Answer

Establish exact course of events and details of type of 'twitching'
Unilateral/bilateral.
Arms/legs.
Tongue biting/foaming mouth.
Colour.
Preceding events.
Duration.
Febrile illness.
Head injury.
Vaccination.
Previous history
Child history of 'fits'/odd behaviour.
Family history of fits.
Details of delivery: traumatic or prolonged.
Full examination of child (also history details from mother relating to symptoms)
Temperature: rectal—whether increased.
ENT: otitis media, inflammed throat, swollen glands.
RS: increased respiration, cough, rib recession, added sounds.
Abdomen: soft, diarrhoea and vomiting, increased bowel sound.
Urinogenital symptoms: increased or decreased urine passed, urinalysis if possible.
CNS: pupils and reacting, limbs equal on movement.
Skin: rash.
Probably admit child as likely to be a maternal anxiety
If pyrexial: undress, tepid sponge, paracetamol elixir.
Definitely admit if no pyrexia or history preceding febrile illness
Explain likely outcome to parents
Hospital: observe him; few tests.
Does not necessarily mean epilepsy.
Not uncommon in children this age in association with temperature.
May have other episodes associated with temperature—not likely to have longterm effect.
Offer support and reassurance

Question 7

● The baby is considered to be prone to febrile convulsions. You next see Jenny and Jack for his third immunization. His first two doses of triple vaccine were given at three and five months with no untoward reactions.

a) What advice would you give concerning future immunizations for this child?

Answer

Would advise against pertussis vaccine (increased likelihood complications following vaccination of child who has fits); also risk of whooping cough less at his age; recommend he have diphtheria and tetanus and polio (no obvious associated complication); fits not necessarily contraindication to measles vaccine.

● During this consultation Jenny tells you that she has just discovered that both her husband and his brother had had fits as toddlers but that nobody on her side of the family had ever had fits.

b) What significance do you attach to Jenny's remark?

Answer

Worried about possible longterm effects of fits in family: often family history of febrile convulsions if only as toddlers, with no sequelae and can reassure her—same course likely with Jack.
Blaming fits on husband's family; further matrimonial disharmony.

Question 8

● Six months later Jenny consults you in a distressed and tearful state. Her husband has decided to live with another woman and she does not know how she will cope.

What would you want to know from Jenny in order to help you predict how she will react to this major life event?

Answer

How she found out: details of circumstances; is he living locally?
Previous major life events and how she coped with them: death of parent, birth of child; terminations.
Her financial situation: who owns the house? Any savings? What is the income now?
Family/friends around to offer support.
How coping with baby Jack now: how is he sleeping?
Previous 'psychiatric'/'mental' history: parasuicide, in-patient/outpatient treatment.
Her own family background: happy family, siblings, parents still alive and whether they live locally, relationship with family.
Alcohol/drug usage.

Question 9

● You see Jenny a week later. She says that she is sure that the major reason for her husband leaving her is that he has discovered from someone about her two previous terminations of pregnancy.

Indicate the psychological defence mechanisms which have been used by Robert and Jenny Parks. Illustrate these from the encounters with the Parks which have been described.

Answer

Blaming others not self: husband left her, has found out from *someone else* about terminations; 'husband's family have history of fits, she doesn't'?

Figure 1. *continued*

Expecting help from outside, baby's at fault not herself or her marital situation: baby difficult at night, can't cope, something to settle him.
Protecting environment which is shaky with signs of outward normality: attempting to get pregnant though unstable domestic situation; question large four-bedroomed detached house.
Trying to keep husband in shaky domestic situation: getting pregnant.
'We're all right—we're a normal couple with nothing wrong': Jenny's denial of husband's sexual problems, which he admits.
Blocking out previous psychological/physical trauma and associated upsets: 'don't tell anyone about my previous terminations'.
Ignoring situation: virtually all consultations were with Jenny although both partners were obviously having problems.
Easy option: husband going off with other woman instead of trying to resolve marital problems.

Figure 1. *continued*

V: Oral examination

THE main advantages of oral examinations is their flexibility and the fact that examiners can explore the range and depth of the candidate's thinking and, in the medical context, his decision-making in clinical and practice management situations. The main disadvantages of oral examinations are their logistics. Orals should therefore be restricted to assessment in those areas which cannot effectively be examined by other more economical means.

In the MRCGP examination, candidates who achieve a minimum level in the written papers are called for two 30-minute oral examinations, each of which is conducted jointly by two examiners. The basis of the first oral is the candidate's log diary in which he provides details of his practice, his workload and 50 patients. During this oral some of the time is spent in exploring the candidate's knowledge and attitudes in the areas of colleague and staff relationships, practice management, reading and research; and the remainder in his decision-making in the management of his own patients. A list of topics covered in the first oral is passed by the candidate to the examiners conducting the second. During this examination any subject relevant to general practice may be explored and, as in the first of the orals, a considerable proportion of the time will be spent in assessing the candidate's reaction to clinical problems in the setting of general practice.

Throughout each oral examination the examiners independently record marks for each topic covered and at the end of the examination make independent overall assessments of the candidate. They discuss any differences and produce a consensus mark. When the marks for each oral are available, the candidate's final mark in the entire examination is calculated. Candidates whose marks are near the borderline are discussed by the four examiners, who will have then been provided with the candidate's marks in the written papers. At this point they may modify the oral marks if necessary, justifying their decision in the examiners' meeting which takes place at the end of the day.

Validity and reliability

Set in the context of the experience of the examiners, all of whom are in active clinical general practice, the oral is seen as a particularly valid technique. Because of the large number of examiners, a number of methods have had to be developed and adopted in an attempt to ensure reliability. For every three, three-hour examining sessions, each examiner must spend one session observing orals conducted by his colleagues, during which he must award marks as though he were an examiner. At approximately every third examination each examiner is videotaped and later in the day he views the tape, appraises his examination technique, re-marks the candidate and explores any discrepancy with his colleagues.

All examiners are expected to attend the annual examiners' workshops at which calibration exercises of this type are carried out. At the beginning of their first day at each examination, all examiners are required to view and mark a standard 15-minute videotape of an oral examination thus calibrating their own marking standards before they begin. All these exercises aim to encourage self-criticism rather than peer-criticism. They provide the opportunity for examiners to increase the reliability of their technique and to monitor the validity of the topics they choose to cover.

Satisfactory construct validity of the oral examination is dependent upon its assessing those candidate attributes which are not assessed by other techniques and avoiding those which are. One particular problem is that of assessing factual knowledge. While this is most reliably assessed by the MCQ paper, it is not possible to examine clinical decision-making without reference to the candidate's knowledge base. For example, the candidate who describes with excellent sensitivity his method of handling the parents of a baby with Down's syndrome should have been able to recognize the condition in the first place. The examiners would find it difficult to award high marks to a candidate who could not make the initial diagnosis. While the assessment of