

that could and should have been done and if not, why not?' Answering this ever-present question should be periodically shared, for no one should be judge and jury. Peer assessment is not an optional extra in professional practice; without effective mechanisms for its universal application public esteem for the medical profession will falter.

The College's quality initiative is an important first step in placing the assessment of performance at the centre of conti-

nuing medical education. It is in line with the well established confidential enquiries into maternal and infant mortality, and the more recent studies of anaesthetic or surgical deaths undertaken by other branches of the profession. Is the time not ripe for the profession as a whole to assure the public that peer assessment is now an essential feature of professional practice?

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Coffee and coronary heart disease

IT has been suspected for many years that some features of our way of life contribute to the risk of developing coronary heart disease. Many studies have examined factors such as cigarette smoking and the dietary constituents sugar, salt, saturated fats, soft water, alcohol, coffee, and so on. Cigarette smoking is now accepted as a major risk factor for coronary heart disease particularly in younger subjects, but for dietary factors the risk is less clear cut.

Several studies have explored the association between coffee consumption and coronary heart disease. In one of the early prospective studies Paul and colleagues¹ found a statistically significant relationship between coffee drinkers and the later development of coronary heart disease. They found that 41% of patients with coronary disease drank more than 100 cups of coffee per month compared with 22% of control subjects. In a second study,² which was mainly devoted to examining the relationship between sucrose and coronary heart disease, they could not confirm a significant relationship between coffee intake and the disease; however, they did find a highly significant association between coffee intake and cigarette smoking.

A few years later two papers were published by the Boston Collaborative Drug Surveillance Program.^{3,4} Their first study,³ which was cross-sectional, was confined to patients admitted to eight hospitals in the USA, Canada and Israel. They reported that 276 patients admitted with acute myocardial infarction had a significantly greater coffee intake before admission than 1104 matched control patients admitted with other diseases, but they found no significant differences between these groups in their consumption of tea. The second paper⁴ reported a cross-sectional study of patients admitted to 24 hospitals in the Boston area. Coffee consumption in 440 patients diagnosed as having acute myocardial infarction was compared with that in over 12 000 patients with other diagnoses. The risk of myocardial infarction in those drinking more than five cups of coffee per day was found to be about twice as great as in those who drank no coffee at all. The difference was statistically highly significant and was not explained by possible confounding factors including cigarette smoking. These reports stimulated a number of letters in the medical press and attracted some publicity in the lay press. They were followed within a few years by a number of prospective studies from the USA and one from Sweden.

Four prospective studies from the USA⁵⁻⁸ failed to demonstrate any significant, independent relationship between coffee drinking and the incidence of new myocardial infarction. However, they did confirm the significant association between coffee consumption and cigarette smoking; for example in the Kaiser-Permanente study⁵ about 30% of cigarette smokers drank more than six cups of coffee per day compared with about 11% of non-smokers. In the Framingham study⁶ coffee consumption was associated with an increased risk of death from all causes, but this relationship was explained by the association between coffee drinking and cigarette smoking.

Two reports from the Swedish prospective study of men living in Gothenberg^{9,10} are of particular interest because the coffee consumption per capita in Sweden is one of the highest in the world⁹ (about twice as great as in the USA) and there is a wide range of consumption. The first paper⁹ reported no association between coffee intake and the incidence of new myocardial infarction in 834 men aged 50 years followed up for 12 years. After 17 years of follow-up¹⁰ the relationship between coffee intake and the incidence of myocardial infarction became statistically significant on univariate analysis but the significance disappeared when cigarette smoking was taken into account. The findings in the prospective study group were also compared with those in a group of 230 male survivors of myocardial infarction.⁹ The survivors reported a coffee consumption before infarction which was significantly greater than that reported by men in the prospective study who later sustained an infarction. This difference was explained as being due either to the effect of having sustained a myocardial infarction on the patients' rating of their coffee consumption or to a real increase in their coffee consumption during the months or years before they suffered myocardial infarction. When the population study and the myocardial infarction patients were combined a significant association between coffee intake and myocardial infarction was found even after standardizing for other variables including smoking, serum cholesterol levels and blood pressure.

In a recent prospective study from the USA¹¹ 1130 male medical students were followed up for 19-35 years and coffee drinking and other risk factors were related to the incidence of new coronary heart disease. At the initial examination 18% of the men drank no coffee at all and 13% drank at least five cups per day. The cumulative incidence of coronary heart disease in the heavy coffee drinkers was 6.7 times as great as in the non-coffee drinkers after 30 years of follow-up. However, after allowing for confounding variables coronary heart disease was not independently associated with the coffee consumption reported at the initial examination but it was significantly associated with the coffee intake reported closest to the coronary event. The authors¹¹ suggest that the long time interval between assessment of coffee intake and coronary events in some of the earlier prospective studies may explain their failure to detect an independent association between the two. They also confirmed¹¹ the correlation between coffee consumption and cigarette smoking and found that those who stopped smoking drank less coffee than those who continued to smoke but more than those who had never smoked.

In most studies heavy coffee drinkers smoked more cigarettes, consumed more sugar and in some studies drank more alcohol⁹ than non-coffee drinkers. They also had higher serum cholesterol levels¹² and in one Norwegian study¹³ had a lower incidence of colon cancer. In the Tromsø study¹⁴ a small group of men with hypercholesterolaemia who stopped drinking boiled coffee had a significant fall in serum cholesterol levels — in

those who resumed drinking boiled coffee cholesterol levels rose again but not in those who resumed drinking filtered coffee.

On balance the evidence does not support a significant, independent relationship between coffee consumption and coronary heart disease, but there is still sufficient uncertainty to leave the question open. In the UK we drink more tea than coffee and there is no evidence to suggest that tea drinking is related to coronary heart disease. However, it would seem reasonable to recommend that heavy coffee drinkers who have hypercholesterolaemia should drink filtered or instant coffee rather than that made by boiling ground coffee beans.

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References

1. Paul O, Lepper MH, Phelan WH, *et al.* A longitudinal study of coronary heart disease. *Circulation* 1963; **28**: 20.
2. Paul O, Macmillan A, McKean H, Park H. Sucrose intake and coronary heart disease. *Lancet* 1968; **2**: 1049-1051.
3. Coffee drinking and acute myocardial infarction: report from the Boston Collaborative Drug Surveillance Program. *Lancet* 1972; **2**: 1278-1281.
4. Jick H, Miettinen OS, Neff RK, *et al.* Coffee and myocardial infarction. *N Engl J Med* 1973; **289**: 63-67.
5. Klatsky AL, Friedman GD, Seigalaub AB. Coffee drinking prior to acute myocardial infarction: results from the Kaiser-Permanente epidemiologic study of myocardial infarction. *JAMA* 1973; **226**: 540-543.
6. Dawber TR, Kannel WB, Gordon T. Coffee and cardiovascular disease: observations from the Framingham study. *N Engl J Med* 1974; **291**: 871-874.
7. Yano K, Rhoads GG, Kagan A. Coffee, alcohol and risk of coronary heart disease among Japanese men living in Hawaii. *N Engl J Med* 1977; **297**: 405-409.
8. Heyden S, Tyroler HA, Heiss G, *et al.* Coffee consumption and mortality: total mortality, stroke mortality, and coronary heart disease mortality. *Arch Intern Med* 1978; **138**: 1472-1475.
9. Wilhelmsen L, Tibblin G, Elmfeldt D, *et al.* Coffee consumption and coronary heart disease in middle-aged Swedish men. *Acta Med Scand* 1977; **201**: 547-552.
10. Welin L, Svardsudd K, Tibblin G, Wilhelmsen L. Coffee, traditional risk factors, coronary heart disease, and mortality. In: McMahon B, Sugimura T (eds). *Coffee and health (Banbury report 17)*. Cold Spring Harbor, New York: Cold Spring Harbor Laboratory, 1984: 219-229.
11. LaCroix AZ, Mead LA, Liang K-Y, *et al.* Coffee consumption and the incidence of coronary heart disease. *N Engl J Med* 1986; **315**: 977-981.
12. Thelle DS, Arnesen E, Forde OH. Does coffee raise serum cholesterol? The Tromso Heart Study. *N Engl J Med* 1983; **24**: 1454-1457.
13. Jacobsen BK, Thelle DS. Coffee, cholesterol, and colon cancer: is there a link? *Br Med J* 1987; **294**: 4-5.
14. Forde OH, Knutsen SF, Arnesen E, Thelle DS. The Tromso heart study: coffee consumption and serum lipid concentrations in men with hypercholesterolaemia: a randomised intervention study. *Br Med J* 1985; **290**: 893-895.

Personal versus shared lists: a continuing debate

IT was apparent from the response to a previous editorial on the advantages of a personal list system in general practice¹ that the range of views on the best method of running a practice are considerable. It therefore seems appropriate to consider the cardinal issues — continuity of care, responsibility for patient care, and the freedom of patients to choose their own doctor.

In theory, continuity of care and responsibility for patient care will be easier to achieve in practices with personal lists, while the freedom of patients to choose their own doctor will be greater in practices with shared lists. In reality, it is not so straightforward. No doctor is available all of the time and so the concept of personal lists is modified by what is reasonably possible. A single-handed doctor who has no outside commitments, and is on call all the time will be absent only when on holiday or when ill, and, it is to be hoped, when on courses of postgraduate study. More common is a doctor in partnership with two to four others, taking half a day or one day off a week, with an off-duty rota or a deputizing service. Some general practitioners work regularly in hospitals or industry or have a private practice. Indeed, the most vigorous and admirable general practitioners hold office in the Royal College of General Practitioners or British Medical Association, take part in undergraduate or postgraduate education or shoulder some of the heavy burdens of National Health Service administration, involving much greater absences from practices.

Compromise is inevitable. For chronic conditions such as arthritis and hypertension a single doctor can conduct all the routine consultations and take responsibility for the patient's care in both a personal and shared list system. However, for the management of acute problems, crises in chronic conditions and terminal care, shared responsibility is unavoidable. Whether personal or shared lists are better for meeting these aspects of practice is an important part of the debate and needs to be considered from the point of view of both patients and doctors.

For the doctor, personal lists enable him to concentrate on a smaller group of patients, obtaining a greater knowledge of their background than would be possible with larger numbers. Illnesses can be treated and monitored with consistency, and there is no doubt among patients, colleagues and supporting staff about who is responsible for each patient's care. Within the practice, each doctor's commitment will be clearly defined, so that there is no possibility of one partner shirking his share of the workload.^{1,2} However, when a patient has to be seen by another doctor they meet as strangers, to their mutual disadvantage, and the consultation is regarded as a stopgap. Moreover the doctor consulted must communicate his findings to the patient's own doctor. The difficulty in achieving accurate and effective communication within practices does not appear to have been considered in previous studies.^{3,4}

In practices where patients and doctors are aware of the shared list policy, the problems are reversed. Acute conditions, crises in chronic disease and terminal care can be handled more satisfactorily, but continuity of care is less easily achieved and it is less clear where the ultimate clinical responsibility lies. Some patients develop preferences for particular doctors, and have the freedom to make appointments with the doctor of their choice whenever possible. In this situation, continuity of care and clinical responsibility are not a problem. On the other hand some patients do not mind which doctor they see and for them consistent management may be more difficult to achieve.

In both a personal and shared list system provision must be made for particular groups of patients. In the personal list system patients who persistently present as emergencies when their own doctor is not available or who wish to see someone other than their own doctor must be accommodated. In a shared list system, patients who have difficulty forming a fruitful relationship with a doctor (the inadequate, the mentally handicapped, the eccentric or the unlikeable⁵) or who simply work the system for their own purposes must be identified and specially catered for.