research or anything else, the public will not give their money. And how can a charity raise money without explaining what it does? Fortunately for the medical research charities in this country, many members of the public who give so generously to these activities seem to take a much more balanced view of the role of research into prevention and treatment or cure than that represented in your leading article.

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SIR,—Your leading article "Medical charities and prevention" (22-29 December, p 1610) is ill judged and misleading.

It is ill judged because comparison of the percentage of funds spent by other national heart foundations on prevention and public education concerning heart disease does not mean that those foundations that spend more achieve a better yield than those that put most of their funds into the support of basic research. A more thoughtful approach might have been to attempt to appraise the relative yield of these alternative policies. While there has been an impressive decline in coronary heart disease mortality in the United States and, to a lesser extent in Australia and several other countries, there is little really convincing evidence that this decline has anything to do with the public education campaigns supported by the various national heart foundations. In all the countries where the decline has taken place it preceded large public campaigns to control risk factors associated with coronary heart disease. Furthermore, there is plenty of evidence, well known to most of your readers, that health education with regard to the prevention of coronary heart disease is frequently ignored by the public, often because it is presented in a confused and contradictory way.

Your leading article is misleading because it confuses prevention with public education. The scientific testing of the prevention of heart disease is an extraordinarily complicated, time-consuming, and expensive problem. The magnitude of conducting large-scale primary, or even secondary, prevention trials is now completely beyond the scope of medical charities. But, in fairness to the British Heart Foundation, it should be pointed out that funds granted by that body permitted the initiation and completion of the pilot phase of the WHO Co-operative Trial of the Primary Prevention of Ischaemic Heart Disease using Clofibrate—the largest and longest double-blind trial ever completed. Indeed, were it not for this initial funding, this study would probably not have taken place. As the senior active principal investigator in that study, and as a member of the Research Funds Committee of the British Heart Foundation, I take the view that medical charities should be expected to play only a catalytic role in the scientific testing of prevention of coronary heart disease.

"Should not the public have more say on how the money is to be spent?" you ask. How can the public possibly judge what is appropriate for prevention of coronary heart disease when the profession itself is divided and scientific proof is lacking in a number of areas, such as the control of hypercholesterolaemia and hypertension? It almost appears that you take the view that, since proof is very difficult to achieve, let us act now regardless of the possibility that the methods chosen have not

been proved to be entirely safe and that reduction of hypercholesterolaemia or of hypertension may not prevent coronary heart disease anyway.

Surely the principal responsibility of heart and cancer charities is to provide support for fundamental and clinical research into their causes? Once these have been clearly established, then a scientific basis should exist for the testing of preventive treatment. Once this has been shown to be effective, then and then only should the medical charity attempt to influence the public in the hope of reducing the total incidence of these diseases in the community.

M F OLIVER

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SIR,—Following your recent leading article "Medical charities and prevention" (22-29 December, p 1610) this association would like to make it known that we at least are one voluntary organisation concerned with a common condition which sees its priorities very much in the "education for prevention" field. We have always devoted a significant amount of general income to education and information, and in the past three years this has been running at over 50% of our total expenditure.

This association fully agrees with your views on the necessity to spend more money on educating the public to help prevent disease and chronic conditions and we would welcome statements by other organisations about how much financial support they give to this area.

ANDREW GORDON CRAIG
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Whooping-cough immunisation

SIR,—In child health clinics mothers have told me that they have been advised by health visitors or doctors not to allow their children to be immunised against whooping cough for the following reasons: the child was given oxygen at birth; baby was preterm (several mothers); baby had jaundice on the third day; was breech delivery; the babies were twins; mother was adopted (two mothers); baby had had monilial nappy rash; father's brother had psoriasis; uncle had eczema; aunt had eczema; mother had eczema when 12 months old; father has hay fever; father had a reaction to tetanus toxoid; mother's mother had a mongol; mother's sister-in-law had had a fit; niece had a fit; mother's father had a fit when 12 months old; mother's stepbrother's son had a fit; mother had a virus infection two years ago; mother's father-in-law had multiple sclerosis; baby had penicillin nine days ago; mother had had a mitral valve replacement; baby said to have a murmur, possibly due to ventricular septal defect (I could find no cardiac abnormality).

A mother asked me why, when she wanted to have her child immunised, she had been asked by the clinic doctor whether she, the mother, had ever had heart trouble. I was unable to answer the question.

What is the common denominator? The wondrous workings of the human mind?

RONALD ILLINGWORTH

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Computers and urinary tract infection

SIR,—May I express my concern, and invite your readers to do the same, with regard to the use of computers in laboratory reports? I have today received a report (not from our own laboratory, I should add) of urine microscopy and culture which is nicely set out and easily read. However, the final line reads, "Recommend treatment with nitrofurantoin," without any medical person signing the report. It would appear on the face of it that this has been recommended by a machine.

I feel that this is a deplorable move in laboratory reporting for three reasons. Firstly, it does not take into account the patient's clinical condition; secondly, there is no record of the method of collecting the urine, so no member of the laboratory staff knows whether this has been collected from an ileal conduit or other diversion; and thirdly the very report does not conclusively show that there is an infection. I will admit that there are "significant numbers" of bacteria present, but there are no cells or casts at all seen on microscopy. Furthermore, there is mucus present, which might suggest to the laboratory that this is in fact from a urinary conduit of some form. I am sure that all urologists would agree that such blind recommendation of antibiotic treatment is unwarranted and, worse still, may well be misleading to clinical staff, particularly those not accustomed to the understanding of such reports. I would be the first to agree that a bacteriologist may well have advice to give us on appropriate chemotherapy, but only when he has been given the full clinical picture and has been requested to give this information. I think this blind advice is worse than blind treatment by clinicians.

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The flight from science

SIR,—One factor which has impelled the flight from science discussed in your leading article (5 January, p 1) is the impersonal attitude adopted by so many of the profession. The modern doctor tends to depend more and more on scientific medicine at the expense of viewing the patient as a whole person. The antibiotic prescribed may well clear up the physical illness, but on its own it has no immediate effect on the basic fears of the worried patient. Chiropractors and the like go to the other extreme, setting themselves to understand how the patient feels and to explain what is wrong. While we all know that tender loving care on its own does not cure active disease, it makes it easier to bear. We need to retrieve some of the empathy and understanding of our forebears, who tried to carry the patient and the family through the crisis of pneumonia. The best medicine is the correct blend of both the science and the art of medicine. *Cum scientia caritas.*

C A H WATTS

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SIR,—I was distressed by the rather extreme view that you took in the leading article (5 January, p 1). I think it is important that one understands the reasons for the "flight from science." If double-blind controlled