fibrillation in Britain, on the prevalence of indications and contraindications for anticoagulation, on factors that influence doctors' decisions to offer treatment and patients' decisions to accept it, and on the costs and benefits of anticoagulant treatment in primary and secondary care.

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Commentary: Caution needed in introducing warfarin treatment

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We welcome the cautious interpretation of the recent trials of warfarin in atrial fibrillation provided by the authors of this article and concur with their concerns about the generalisability of the results of this group of trials. We congratulate them on introducing the concept of packages of care in this context—packages that include not just the prescribing of drugs but rigorous selection of patients and meticulous monitoring and follow up.

The authors' analysis of the trials highlights the huge exclusion rates of patients initially considered eligible

and, correctly in our view, links these stringent exclusion criteria and the intensity of follow up of patients to the uniformly low bleeding rates that were found in all the trials. We would go further and point out that for quite large periods of time in all but one of the trials patients were in fact underanticoagulated according to the individual trial's acceptable range of anticoagulation (table). We also argue that the minor bleeding rates in these trials were not given enough consideration in the reviews that summarised their results.⁷ There was no agreed definition of minor

Trial	Below lower limit (%)	Above higher limit (%)
Atrial fibrillation, aspirin, anticoagulation ¹	26.0	0.6
Boston area anticoagulation trial for atrial fibrillation ²	9.0	8.0
Stroke prevention in atrial fibrillation ³	23.0	5.0
Canadian atrial fibrillation anticoagulation ⁴	39.6	16.6
Stroke prevention in nonrheumatic atrial fibrillation ⁵	29.0	15.0
European atrial fibrillation trial ⁶	32.0	9.0

bleeding among the trials, and in one, the Boston area anticoagulation trials for atrial fibrillation,² minor bleed was held to include any bleeding event that required transfusion of up to four units of blood. There is evidence that minor bleeding has a substantial impact on patients receiving warfarin,⁸ and, as general practitioners, we recognise the impact of these events on the workload of the primary health care team. Even clinically innocuous complaints like menorrhagia or epistaxis require prompt assessment, often at home, if they occur in patients taking warfarin.

Finally, we welcome the authors' assessment of the cost implications of treating patients with warfarin. Up to now cost analyses in this context have focused on a narrow health service perspective when the wider cost may well be greater.

FIG 2—Spontaneous haemorrhage is a danger of warfarin treatment

What, then, is the best way forward? The results in the trial populations certainly show that warfarin protects against stroke in patients with atrial fibrillation. After the publication of the stroke prevention in atrial fibrillation II trial, and the analysis of the pooled data, doctors are now in a better position to stratify risk in patients with atrial fibrillation.^{9,10} The former confirmed the usefulness of considering clinical predictors of thromboembolism—hypertension, recent congestive heart failure, and previous thromboembolism—when choosing between aspirin and warfarin for treating patients with atrial fibrillation. Evidence also shows that patients with lone atrial fibrillation may not need prophylaxis. In one retrospective study their annual incidence of stroke was 0.5%.¹¹ On the basis of the present evidence all other patients who have atrial fibrillation should be considered for anticoagulants if there are no contraindications.

We agree with Sudlow *et al* that this may well result in increased referrals for echocardiography, as this also

may influence the choice of aspirin against warfarin. We also support the authors' concern that factors beyond the firm contraindications for warfarin may influence general practitioners' decision to give anticoagulants. Advising patients about their warfarin dose over the telephone may not be prudent if patients are developing a visual impairment and may not be able to read the label on their bottle or if they are becoming forgetful and cannot remember taking their tablets at the usual time. Such important but ill defined circumstances will influence decisions to start warfarin treatment and will have to be re-evaluated regularly as the treatment continues.

Finally, patients' autonomy will be the final factor that influences the acceptance or rejection of doctors' advice about treatment. While some argue that patients are overwhelmingly driven by a fear of stroke (A Laupacis, personal communication), that is not our experience in general practice. Concerns about bleeding, the inconvenience of frequent blood tests, and worries about taking other drugs all play a part, rightly or wrongly, in patients' decisions when they are offered warfarin treatment. We certainly support these authors' call for evidence based guidelines for patient selection and treatment; we suggest that these should include advice about stopping treatment when other developing conditions render it unsafe to continue. This issue has highlighted the need for primary care researchers to evaluate new evidence which will have a substantial impact on their sector of health care.

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Correction

Recent advances in psychiatry

Two editorial errors occurred in the summary box in this paper by Rosalind Ramsay and Tom Fahy (15 July, pp 167-70). Risperidone was misspelt as resperidone, and on chromosome 19 the e4 allele of apolipoprotein E is a risk factor, and the e2 allele protective, for Alzheimer's disease, not the converse as printed.