Table 1—*Cost per life year gained with diuretic and β blocker treatment (thousands of Swedish crowns at 1992 prices; 10 Swedish crowns = £1). *With permission*[3]

Diastolic blood pressure (mm Hg)	Age (years)					
	<45		45-69		≥70	
	Men	Women	Men	Women	Men	Women
90-94	681	1805	26	122	13	8
95-99	551	1328	CS	56	3	CS
100-104	438	931	CS	CS	CS	CS
≥105	283	422	CS	CS	CS	CS

CS = Cost saving.
*Assuming a discount interest rate of 5% for costs and life years, an annual pharmaceutical cost of 900 Swedish crowns (annual treatment cost 2300 Swedish crowns), a treatment period of one year, and a reduction in risk of coronary heart disease of 16% and of stroke of 38%.

blood pressure in Sweden.[3] The report contains a critical review of the literature focusing on the absolute treatment effects attained and a series of cost effectiveness analyses of treating high blood pressure in Swedish men and women with and without other risk factors.

The total annual cost of treating hypertension in Sweden in 1992 was about 1.6 billion Swedish crowns (£160m). Cost effectiveness analyses calculating the cost per life year gained showed that this cost decreased with increasing age in both sexes, as table 1 shows for treatment with diuretics and β blockers. The cost was also lower at a higher initial blood pressure. It is reasonable to assume that even more expensive drugs are cost effective for their special indications, provided they have an effect on morbidity and mortality, which remains to be proved, and no major side effects.[3]

We agree with Jackson and Sackett that it is time to put more emphasis on absolute treatment effects than on relative ones. An alternative (which may be easier to explain to patients) to the numbers needed to treat to prevent an unwanted event is to give the chances over, say, five years of remaining free of an unwanted event (for example, a stroke) in those actively treated and those not treated or treated with placebo. This has been done in the report by the Swedish Council on Technology Assessment in Health Care, with a set of tables from most of the major studies on the risks and benefits of antihypertensive treatment.[3]

The report may be requested (free) from the Swedish Council on Technology Assessment in Health Care, PO Box 161 58, S-103 24 Stockholm, Sweden (fax +46 8 611 79 73).

LARS H LINDHOLM
Chairman of project committee
LARS WERKÖ
Chairman of board of Swedish Council on Technology Assessment in Health Care

Department of Community Health Sciences,
Lund University,
S-223 54 Lund,
Sweden

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Technical difficulties may have affected study's results

EDITOR,—We agree with the main conclusion of T P Fahey and T J Peters—namely, that hypertension guidelines vary considerably and that guidelines should explicitly target those people with higher absolute levels of cardiovascular risk.[1] Yet we are not convinced by many of the detailed arguments in the authors' paper.

Why did the authors choose to study patients who had already been labelled in their notes as hypertensive and were currently taking antihypertensive treatment? This group is not defined by any of the guidelines. It will include some who have never had hypertension by any guideline and will exclude some whom all the guidelines would have included. It is not a group to generate generalisable conclusions.

The authors found that the different guidelines produced large discrepancies in the number of patients whose blood pressure seemed to be controlled, and hence in the number who required treatment. There are at least two explanations for this observation. The first—and the only possibility considered by the authors—is that other risk factors need to be taken into account and that guidelines differ in their ability to do this. The second, and potentially major, explanation is that technical difficulties get in the way. Fahey and Peters's assessment of blood pressure control is flawed for at least three reasons.

Firstly, most guidelines demand numerous readings before treatment is started. In their study the authors used single readings, and never more than three in total. It is then an error to use a risk table from a guideline without first correcting for regression dilution bias, which is the weakening of the apparent relation between risk and blood pressures based on few readings.

Secondly, digit preference in recording[2] and perseverance in subsequent measurements[3] make the interpretation of small threshold changes perilous.

Thirdly, the distribution of blood pressures determines the comparison of control based on a threshold method with control measured by absolute risk. The distribution of blood pressure in these patients will be peculiar to the behaviour of the patients and physicians in Oxfordshire and may be quite different elsewhere.

Altogether, 2.1% of subjects did not have their blood pressure recorded and were excluded. How many patients had no documentation about other risk factors, and how were the guidelines interpreted when additional risk factors were not recorded? The conclusion of the paper depends crucially on the coincidence of blood pressure and risk factors in the same patients: missing data can have a profound effect.

STUART BARTON
Senior lecturer in primary care therapeutics
MIKE CRANNEY
General practice research fellow
TOM WALLEY
Professor of clinical pharmacology

Department of Pharmacology and Therapeutics,
University of Liverpool,
Liverpool L69 3BX

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Authors' reply

EDITOR,—We agree with Lars H Lindholm and Lars Werkö that guidelines that focus on the absolute risks and cost effectiveness of treatment are likely to make management of hypertension more rational. Stuart Barton and colleagues suggest that misclassification may have occurred because of incompleteness in recording of blood pressure and risk factors. In our study four fifths of patients had three records of blood pressure and 98% had evidence of a blood pressure record in the previous five years. Validation of computer records in a sample of patients showed that 11% of patients had additional blood pressure records in their notes. The completeness of records of other risk factors varied greatly (body mass index 83%, cholesterol concentration 24%, smoking status 89%). If a factor was not recorded then it was deemed not to be present; thus misclassification was always in the direction of underestimating absolute risk, making such estimates conservative.

Our study was a pragmatic one. We accept that digit preference and more frequent recordings may alter threshold measurements and subsequent estimation of control in guidelines that rely primarily on blood pressure alone. In contrast, blood pressure is only a small determinant of overall absolute cardiovascular risk[1 2]; therefore measurement error and digit preference are far less important when determining control of hypertension according to an absolute risk standard. Indeed, we found that high blood pressure alone, in this group of patients, is a poor predictor of absolute risk.[3]

T P FAHEY
Lecturer in primary care
T J PETERS
Senior lecturer in medical statistics

University of Bristol,
Department of Social Science,
Bristol BS8 2PR

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St John's wort for depression

EDITOR,—The meta-analysis about the use of St John's wort (*Hypericum perforatum*) for depression[1] and the accompanying editorial highlight[2] two important points. The first is the growing interest in phytotherapy in Britain and the large amount of scientific data that still needs to be collected to confirm the anecdotal evidence about the safe and effective use of such preparations (which are often used for self treatment). There is a serious shortage of funds available for the necessary work to be carried out at all levels, but there is also a need for more clinicians in Britain to be willing to participate in clinical trials of well authenticated herbal material.

The second important point is that plants to be used for phytotherapy need to be identified correctly. The illustration in the editorial is not of *Hypericum perforatum* but of another species of *Hypericum*.[2] *H perforatum* does not have the leaf shape or fruits shown in the figure. Correct identification of species is extremely important because use of the wrong plant may result in lack of effect or even toxicity. A large number of toxicological effects that are attributed to particular