Randomised controlled trial comparing problem solving treatment with amitriptyline and placebo for major depression in primary care

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Abstract

***Objective*—To determine whether, in the treatment of major depression in primary care, a brief psychological treatment (problem solving) was (*a*) as effective as antidepressant drugs and more effective than placebo; (*b*) feasible in practice; and (*c*) acceptable to patients.**

***Design*—Randomised controlled trial of problem solving treatment, amitriptyline plus standard clinical management, and drug placebo plus standard clinical management. Each treatment was delivered in six sessions over 12 weeks.**

***Setting*—Primary care in Oxfordshire.**

***Subjects*—91 patients in primary care who had major depression.**

***Main outcome measures*—Observer and self reported measures of severity of depression, self reported measure of social outcome, and observer measure of psychological symptoms at six and 12 weeks; self reported measure of patient satisfaction at 12 weeks. Numbers of patients recovered at six and 12 weeks.**

***Results*—At six and 12 weeks the difference in score on the Hamilton rating scale for depression between problem solving and placebo treatments was significant (5·3 (95% confidence interval 1·6 to 9·0) and 4·7 (0·4 to 9·0) respectively), but the difference between problem solving and amitriptyline was not significant (1·8 (−1·8 to 5·5) and 0·9 (−3·3 to 5·2) respectively). At 12 weeks 60% (18/30) of patients given problem solving treatment had recovered on the Hamilton scale compared with 52% (16/31) given amitriptyline and 27% (8/30) given placebo. Patients were satisfied with problem solving treatment; all patients who completed treatment (28/30) rated the treatment as helpful or very helpful. The six sessions of problem solving treatment totalled a mean therapy time of 3½ hours.**

***Conclusions*—As a treatment for major depression in primary care, problem solving treatment is effective, feasible, and acceptable to patients.**

Introduction

Depressive disorders are very common in primary care, the prevalence of both major and minor depression being 5%.[1] These disorders can cause considerable morbidity.[2,3] Many patients with depressive disorders in primary care have a good outcome in the short term, but a significant proportion develop chronic illnesses.[4,5] The treatment of depressive disorders in primary care has traditionally relied on drugs and reassurance,[6] tricyclic antidepressants being more effective than placebo for patients with major depression.[7-10] Patient compliance with antidepressant treatment in primary care is not good. Johnson found that 41% of depressed patients stopped taking their drugs within two weeks, and 68% within four weeks.[11]

The alternative to drug treatment is psychological treatment. Cognitive therapy and counselling have been given for depressive disorders in primary care. Cognitive therapy is probably an effective treatment for major depression in primary care,[12-15] but it is time consuming (12-16 sessions) and requires specialist skills that are often not widely available in primary care. Two studies have evaluated counselling by social workers. The first study examined whether counselling in primary care was more effective than treatment as usual for 80 women with depressive disorders in London.[16] Overall, little difference in outcome was found between the control and experimental groups. In Edinburgh such counselling was found to be better than care from general practitioners,[15] but 12 hours of counselling were provided compared with only 50 minutes of a general practitioner's time.

If a psychological treatment for depressive disorders is to be widely available in primary care it should be brief and suitable for delivery by a member of the primary health care team. Problem solving is a psychological treatment that meets these requirements. Patients learn to use their own skills and resources to cope with both present and future problems.[17] Problem solving has several stages: (*a*) identifying and clarifying the problem; (*b*) setting clear achievable goals; (*c*) brain-storming to generate solutions; (*d*) selecting a preferred solution; (*e*) clarifying the necessary steps to implement the solution; and (*f*) evaluating progress.

In an earlier study in Oxford problem solving was an effective treatment for patients with emotional disorders likely to have a poor prognosis in primary care.[18] We report the evaluation of problem solving as a treatment for major depression.

Patients and methods

DESIGN

A controlled clinical trial was carried out to compare three treatments for major depression in primary care: (*a*) problem solving; (*b*) amitriptyline with standard clinical management and (*c*) drug placebo with standard clinical management. Ninety one patients with major depression were randomly allocated to one of these three treatments. Randomisation was stratified to ensure that the three treatment groups contained patients with depressive disorders of equivalent severity.

PATIENTS

Patients were recruited from 26 general practitioners working in 15 local practices. The doctors were asked to refer patients aged 18-65 who were judged to have a depressive disorder meeting the study's selection criteria.

SELECTION CRITERIA

The main criterion for inclusion was that patients met the research diagnostic criteria for major depres-

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BMJ 1995;310:441-5

sion—namely, that they had experienced low mood accompanied by at least four key symptoms of depression, such as appetite disturbance, sleep difficulty, loss of energy, poor concentration, guilt, suicidal thoughts, loss of interest or pleasure in usual activities, and psychomotor retardation, for at least two weeks.[19] In addition, patients had to score 13 or more on the Hamilton rating scale for depression (17 items), which measures the severity of depression.[20]

Criteria for exclusion included having another psychiatric disorder (other than anxiety disorder) before the onset of the depression, receiving current psychological or antidepressant drug treatment, having current psychotic symptoms, having serious suicidal intent, having a history of schizophrenia, recent drug or alcohol misuse, or physical problems that would preclude being able to take amitriptyline.

Patients who gave their consent to the study were randomly allocated to treatment using a system of sealed envelopes. Recruitment continued until 30 patients had been allocated to each treatment group.

In calculating the sample size the Hamilton rating scale for depression was chosen as the main outcome measure. We assumed that the standard deviation would be 4,[10] that a clinically significant difference would be 4, and that the attrition rate would be 20%. A sample size of 90 patients has a power of greater than 0·90 at a significance level of 0·05.

THERAPISTS

There were three therapists: a psychiatrist who was experienced in problem solving (LMM-W) and two general practitioners who had received training in problem solving and in a standardised method of drug administration (ARL-T and DT). The training in problem solving began with a short theoretical course that entailed reading relevant papers, role playing in clinical scenarios, and watching a training videotape. The two general practitioners then treated five patients under the supervision of the psychiatrist.

TREATMENTS

Treatment was usually given in the patient's home or local health centre. In all three treatment groups patients were offered six treatment sessions over three months (weeks 1, 2, 3, 5, 7, and 11). One additional therapy session could be offered at the therapist's discretion. The first session was planned to last about 60 minutes and subsequent sessions about 30 minutes.

Two treatment manuals were prepared. The first stipulated the content of problem solving. The second stipulated the content of drug treatment and was based on the manual used in the American National Institute of Mental Health's treatment of depression collaborative research programme.[21]

PROBLEM SOLVING TREATMENT

In the first session the therapist gave the following simple explanation of the rationale of problem solving: emotional symptoms are caused by problems in living; if the problems are dealt with effectively the symptoms will improve; problems can be dealt with effectively by the technique of problem solving. After this explanation the patient's problems were identified and listed. By discussion with the therapist the patient chose one problem as a focus of treatment for the first session. The stages of problem solving were explained to the patient by reference to the chosen problem. In subsequent sessions further problems were dealt with in the same way.

DRUG AND PLACEBO TREATMENT

Amitriptyline and placebo were prescribed as if amitriptyline was being given, and both patient and therapist were blind to the contents of capsules. The aim was to deliver the drug treatment in a way that would maximise patient compliance in the context of a caring, therapeutic relationship. Specific psychological interventions, in particular problem solving, were avoided, but non-specific interventions such as listening, encouraging, and sympathising were included. If patients raised problems these were listened to sympathetically but no advice was given about how to manage the problem. In the first session the patient was told about the principles of drug treatment for depression. Two capsules (a total of 50 mg amitriptyline) were prescribed for two nights, followed by an increase of 25 mg every third night until six capsules (150 mg amitriptyline) were being taken. The duration of each session was the same as that of the problem solving sessions. In the first session a checklist was used to elicit target symptoms, which were used as a focus for discussion in subsequent sessions. In the second and subsequent sessions any side effects were elicited and ways of minimising them discussed. Patient compliance was assessed by counting the capsules returned at each session.

ASSESSMENTS OF OUTCOME

Patients were assessed on three occasions: before treatment and after six and 12 weeks. The assessments were made by one of two experienced research interviewers who were blind to the type of treatment given.

Four main outcome measures were recorded at each assessment. Two were rated by the interviewer: the present state examination (a measure of psychological symptoms)[22] and the Hamilton rating scale for depression (a measure of severity of depression). The other two were rated by the patient: the Beck depression inventory (a measure of severity of depression)[23] and the modified social adjustment scale (a measure of social functioning).[24] To elicit the patient's views of treatment a self rated scale was given at the completion of treatment. If patients dropped out of treatment a termination assessment was completed when possible with the four main outcome measures. For ethical reasons at the six week assessment an independent research worker identified patients taking placebo who had not shown a 25% improvement in scores on either the Beck depression inventory or the Hamilton rating scale for depression. These patients were withdrawn from the study and given appropriate treatment.

ANALYSIS

To determine the efficacy of the three treatments, analyses of covariance were computed for the four main outcome measures, the covariate being the score before treatment on the dependent variable. Eighty two patients were included in this analysis—namely, all patients who completed four or more treatment sessions. These patients received what is believed to be a minimum adequate course of the treatment to which they had been assigned. If the score at the six or 12 week assessment was not available the last score obtained was used in the analysis.

Results were available from 79 patients at the six week assessment: for three patients taking placebo we used the scores obtained on being withdrawn from the study. Results were available from 65 patients at the 12 week assessment, scores on withdrawal or at the six week assessment being used for one patient in the problem solving group, two patients given amitriptyline, and 14 patients given placebo.

If the analyses of covariance showed a significant ($P < 0·05$) effect of treatment the data were examined to determine which treatments differed significantly from each other. This was done by examining the difference between the adjusted mean outcome scores and 95% confidence intervals with the Bonferroni method for

TABLE I—*Demographic characteristics of patients in study. Values are numbers of patients unless stated otherwise*

Demographic characteristic	Treatment groups: Problem solving (n=30)	Amitriptyline (n=31)	Placebo (n=30)	Total (n=91)
Age (years):				
Mean	37·3 (12·8)	37·2 (11·4)	37 (10·4)	37·1 (11·4)
Range	19-65	18-58	21-60	18-65
Sex:				
Male	5	7	9	21
Female	25	24	21	70
Marital status:				
Married	18	22	21	61
Single	8	6	3	17
Divorced or widowed	4	3	6	13
Social class:				
1 and 2	11	9	10	30
3	15	13	9	37
4 and 5	3	7	10	20
Student	1	2	1	4
Education:				
No qualifications	5	7	8	20
Left school at 16	14	14	14	42
Left school at 18	5	7	3	15
University degree	6	3	5	14
Paid employment:				
Yes	16	20	18	54
No	14	11	12	37
Ethnic group:				
White	29	30	28	87
Not white	1	1	2	4

TABLE II—*Proportions (percentages) of patients completing four and six sessions of treatment in each group*

Treatment group	Four sessions (n=82)	Six sessions (n=65)
Problem solving	29/30 (97)	28/30 (93)
Amitriptyline	27/31 (87)	25/31 (81)
Placebo	26/30 (87)	12/30 (40)

each pair of treatments—namely, problem solving and placebo, problem solving and amitriptyline, and amitriptyline and placebo. The mean outcome scores were adjusted for the scores before treatment.

To determine the differential effect of the treatments in producing clinical recovery, a Pearson χ^2 analysis of the proportion of patients who recovered with each treatment was performed on the whole sample. Further analyses (2×2) were done only if a significant ($P<0·05$) difference was shown between the three treatments. Fisher's exact test was used if any expected cell value in the 2×2 table was less than 5.

Results

SELECTION OF PATIENTS

Of 173 patients referred by their general practitioners, 107 met the entry criteria, of whom 91 agreed to take part in the trial. Sixty six patients were excluded, mostly because they did not meet the research criteria for major depression. Among the 16 eligible patients who declined to take part in the study most were unwilling to accept the possibility of random allocation to a placebo treatment.

CHARACTERISTICS OF THE PATIENT SAMPLE

Table I shows the demographic characteristics of the patients. The mean and median duration of depressive disorder for the total sample was 8·4 and 6 months respectively. Only 18 patients had received treatment for their current episode of depressive disorder. Forty three patients had had one or more previous episodes of depressive disorder requiring treatment (26 patients had had one episode and 17 more than one episode). Forty patients had a first degree relative who had required treatment for depression.

TREATMENT RECEIVED

Of the 91 patients entering the trial, 65 completed six sessions of treatment over 12 weeks and another 17 patients completed four treatment sessions. Table II gives the numbers of patients in each treatment group who completed four and six sessions of treatment.

There was no significant difference between the three groups in the proportions of patients completing four treatment sessions. There was, however, a significant difference ($P<0·01$) between the groups in the proportion of patients completing the full course of treatment. This difference at 12 weeks is explained by the high attrition rate among patients in the placebo group. Patients discontinued treatment because they were not getting better (one in the problem solving group, one in the amitriptyline group, and eight in the placebo group) or because of side effects (three in the amitriptyline group and two in the placebo group). Five patients were withdrawn from the placebo group at six weeks because they had not responded to treatment.

Patients who completed treatment had spent a mean total time with a therapist at 12 weeks of 214 minutes in the problem solving group, 183 minutes in the amitriptyline group, and 173 minutes in the placebo group. Thus patients receiving problem solving treatment spent more time with a therapist than did those receiving drugs, although the extra time was short, about 30 minutes.

The mean dose of amitriptyline taken during treatment (as determined by counting the capsules returned) was 139 mg in those who completed treatment.

OUTCOME

Table III shows the results of treatment at six and 12 weeks in patients who received at least four treatment sessions. This sample reflects the outcome for patients who received a defined minimum exposure to their treatment. The adjusted mean outcome scores are given for four measures: the Hamilton rating scale for depression, the Beck depression inventory, the present state examination, and the social adjustment scale. The scores are adjusted for the score before treatment on that variable.

On all four outcome measures there were no significant differences before treatment between the three groups. Depression severity and social functioning were, however, significantly different between the three groups at six and 12 weeks.

Table IV shows the pairwise comparisons for the three outcome measures for which significant differences were found. The adjusted mean differences in outcome between each pair of treatments are shown together with 95% confidence intervals (with the Bonferroni's method). Problem solving treatment was significantly superior to placebo as shown by the 95% confidence intervals at both six weeks and 12 weeks on all three outcome measures. There was no significant difference between problem solving and amitriptyline treatment.

As we have already said, for ethical reasons predetermined withdrawal criteria were applied to patients in the placebo group. If the same withdrawal criteria had been applied to the two other groups, one

TABLE III—*Mean (SD) scores on four main outcome scales before and six and 12 weeks after treatment*

	Problem solving (n=29)	Amitriptyline (n=27)	Placebo (n=26)	P value*
	Hamilton rating scale for depression			
Before treatment	19·4 (4·9)	19·1 (4·8)	18·4 (3·6)	0·688
Week 6	8·5 (6·2)	10·3 (6·5)	13·8 (5·7)	0·006†
Week 12	7·1 (6·7)	8·1 (7·1)	11·8 (7·3)	0·037†
	Back depression inventory			
Before treatment	26·5 (9·9)	26·3 (8·4)	25·9 (8·5)	0·972
Week 6	11·3 (9·4)	14·8 (10·3)	17·5 (11·7)	0·032†
Week 12	9·0 (9·9)	11·9 (10·5)	16·8 (12·4)	0·012†
	Present state examination			
Before treatment	22·3 (5·9)	23·4 (6·9)	21·3 (5·1)	0·462
Week 6	13·0 (9·4)	14·5 (7·7)	17·5 (7·7)	0·069
Week 12	9·3 (9·0)	10·1 (7·9)	14·4 (8·5)	0·056
	Social adjustment scale‡			
Before treatment	2·80 (0·60)	2·78 (0·35)	2·78 (0·43)	0·789
Week 6	2·17 (0·67)	2·32 (0·49)	2·62 (0·68)	0·007*†
Week 12	1·97 (0·56)	2·19 (0·56)	2·47 (0·74)	0·019†

*For comparison between analysis of variance before treatment and analysis of covariance after six and 12 weeks between the three groups.
†$P<0·05$.
‡Data missing on six patients.

TABLE IV—*Pairwise comparisons between treatment groups*

Comparison	Mean difference (95% confidence interval)*
Beck depression inventory	
At six weeks:	
Problem solving *v* placebo	6·20 (0·90 to 11·50)
Problem solving *v* amitriptyline	3·54 (−1·71 to 8·79)
Amitriptyline *v* placebo	2·66 (−2·73 to 8·05)
At 12 weeks:	
Problem solving *v* placebo	7·88 (1·95 to 13·81)
Problem solving *v* amitriptyline	2·98 (−2·88 to 8·85)
Amitriptyline *v* placebo	4·90 (−1·13 to 10·92)
Hamilton rating scale for depression	
At six weeks:	
Problem solving *v* placebo	5·31 (1·62 to 9·00)
Problem solving *v* amitriptyline	1·83 (−1·81 to 5·47)
Amitriptyline *v* placebo	3·48 (−0·26 to 7·23)
At 12 weeks:	
Problem solving *v* placebo	4·69 (0·41 to 8·96)
Problem solving *v* amitriptyline	0·94 (−3·28 to 5·15)
Amitriptyline *v* placebo	3·75 (−0·59 to 8·09)
Social adjustment scale	
At six weeks:	
Problem solving *v* placebo	0·45 (0·13 to 0·77)
Problem solving *v* amitriptyline	0·14 (−0·17 to 0·46)
Amitriptyline *v* placebo	0·30 (−0·02 to 0·62)
At 12 weeks:	
Problem solving *v* placebo	0·45 (0·09 to 0·80)
Problem solving *v* amitriptyline	0·22 (−0·13 to 0·57)
Amitriptyline *v* placebo	0·23 (−0·13 to 0·58)

*Of difference between adjusted means (Bonferroni method).

TABLE V—*Numbers (percentages) of patients meeting recovery criteria six and 12 weeks after treatment in each group*

Recovery	Problem solving (n=30)	Amitriptyline (n=31)	Placebo (n=30)	P value*
At week six:				
Hamilton rating scale for depression ≤7	12 (40)†	9 (29)	1 (3)	0·003
Beck depression inventory ≤8	13 (43)	8 (26)	7 (23)	0·19
At week 12:				
Hamilton rating scale for depression ≤7	18 (60)†	16 (52)†	8 (27)	0·03
Beck depression inventory ≤8	17 (57)	11 (36)	9 (30)	0·08

*Pearson χ^2 analysis between all three groups. †$P < 0·05$ in paired comparison with placebo.

patient would have been withdrawn from the problem solving group and three from the amitriptyline group. For these patients the analyses of covariance were repeated but using the scores at the six week assessment instead of those at 12 weeks. This analysis did not change the distribution of significant findings.

To determine the number of patients meeting criteria for clinical recovery at six and 12 weeks two predefined criteria were set: patients were deemed to have clinically recovered if their score on the Hamilton rating scale for depression was 7 or less or if their score on the Beck depression inventory was 8 or less. These criteria were recommended for use in trials of treatment for depressive disorder.[25] Patients who dropped out of treatment were deemed not to have recovered. Table V shows the number of patients who recovered according to these two criteria.

Patients' satisfaction with problem solving treatment was high, as shown by the low drop out rate. On a self report measure of satisfaction, all 28 of those who completed the problem solving treatment described it as helpful or very helpful compared with 21 of the 25 who had completed amitriptyline treatment.

Outcome was no different whether patients were treated by the research psychiatrist or the research general practitioners.

Discussion

We aimed to answer three questions about the treatment of major depression in primary care: (*a*) is problem solving as effective as amitriptyline and more effective than placebo? (*b*) is problem solving a feasible psychological treatment in primary care? and (*c*) is problem solving acceptable to patients? We found (*a*) that problem solving was more effective than placebo and as effective as amitriptyline in treating major depression in primary care, (*b*) that it was an effective psychological treatment that could be delivered in six sessions over 3½ hours by general practitioners, and (*c*) that patients' satisfaction with problem solving was high, as shown by a low attrition rate and by high satisfaction ratings on a self report feedback form.

The drop out rate was high between the six and 12 week assessments among patients receiving placebo largely because of their poor recovery rate. The analysis at 12 weeks assumes that patients who have dropped out will have the same score at 12 weeks as when they dropped out. Given that there could be spontaneous improvement, this might bias the result in favour of problem solving treatment. The outcome at six weeks before many of the patients had dropped out was, however, little different from the outcome at 12 weeks, which suggests that problem solving treatment is more effective than placebo.

We expected that amitriptyline would be significantly more effective than the placebo treatment, although this was not one of the main hypotheses of the study. Amitriptyline may not have been significantly better than placebo because of the strength of the placebo treatment, which comprised not only a drug placebo but also a psychological placebo of general support, encouragement, and a detailed interest in symptoms and progress. It is all the more striking, therefore, that problem solving was significantly more effective than this placebo treatment, which strongly suggests that it has a specific therapeutic benefit in addition to providing general support and encouragement.

The clinical importance of the results relies on the size of the treatment effects. Table IV clearly shows a difference between problem solving and placebo at 12 weeks of 7·9 on the Beck depression inventory and 4·7 on the Hamilton rating scale for depression. These differences are clinically significant and indeed are greater than the differences between amitriptyline and placebo.

The general practitioners may have referred patients to the study whom they believed might particularly benefit from problem solving treatment. After recruitment had been completed, informal discussion with the referring doctors suggested that the main reason for non-referral of some potentially suitable patients was that some patients were unwilling to be referred into a trial with randomised allocation to treatment. In addition, if higher doses of amitriptyline had been given more patients might have responded. However, the mean dose of amitriptyline taken by our patients (139 mg) was higher than that taken by patients in a comparable study in British primary care (119 mg).[10]

The efficacy of the two active treatments can be compared with the efficacy of drug and psychological treatments in other outcome studies. A meta-analysis of treatment for outpatients with major depression showed that recovery rates were 52% with tricyclic antidepressant treatment, 55% with behavioural therapy, and 47% with cognitive therapy.[26] Our recovery rates are equivalent to these findings.

To be feasible and available in primary care for all potentially suitable patients a psychological treatment has to be brief. The total duration of problem solving treatment was about 3½ hours over six sessions, which is considerably less than the duration of other psychological treatments used in major depression—for example, cognitive therapy and interpersonal therapy. It is also important that the treatment can be delivered by non-specialists. Two of the therapists in this study were general practitioners with no specialised psychiatric experience. These doctors may have been particularly motivated, but the findings suggest that problem solving treatment can be given by non-specialists after fairly brief training.

Key messages

- Depressive disorders are common in primary care and a cause of considerable psychological and social morbidity
- Patient compliance with antidepressant treatment is often poor, so there is a need for a psychological treatment
- This study found that problem solving is an effective psychological treatment for major depression in primary care—as effective as amitriptyline and more effective than placebo
- Problem solving is a feasible treatment in primary care, being effective when given over six sessions by a general practitioner
- Problem solving treatment is acceptable to patients

Patients' satisfaction with problem solving treatment was high, as shown by the low attrition rate and by the patients' responses to a self report questionnaire. Patients found treatment relevant to their symptoms, and their compliance was good.

Our findings suggest that problem solving treatment is an effective and feasible treatment for major depression in primary care.

We thank the Wellcome Trust for funding a training fellowship for LMM-W; the general practitioners for actively supporting the study; Mrs Faith Barbour and Mrs Alison Bond for interviewing the patients; Mrs Irene Stratton for statistical advice; Mrs Ann Day for administrative help; Mrs Annie Goodall for typing the manuscript; Dr P Cowen for his helpful comments on an earlier draft; and Warner-Lambert for providing amitriptyline and drug placebo.

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(Accepted 12 January 1995)

A PAPER THAT CHANGED MY PRACTICE

Effective and efficient consulting arrangements?

General practitioners whose educational experiences have embraced Michael Balint's work and the Leeuwenhorst "physical, emotional, and social" description of our job tend to favour longer consultations and to value the time spent with those patients wishing to unravel psychological problems. This results in surgeries which run and finish late, frustrated patients who endure longer waiting times, and embattled receptionists who undergo difficult mornings.

The work of John Howie and his colleagues shows the possibility of rearranging consulting time so that instead of running progressively later within an eight patient an hour framework you can reframe into a six patient, 10 minute system, while still finishing consulting at precisely the same moment.[1] Patients wait less time and doctors feel less stressed.

My experience of sharing Howie's work in my practice team was of partners predicting unfairness and voicing concern about fewer patients being seen and longer surgeries meaning reduced flexibility. None of these difficulties struck the receptionists as being insuperable, and I eventually decided to go it alone for a trial period, starting surgery earlier and finishing later, but seeing the same number of booked patients.

Many things altered, some almost imperceptibly, others strikingly. Firstly, my surgeries immediately felt more relaxed. Patients spent much less time waiting. Fitting in extras, seeing patients who were visiting the practice nurse, and taking telephone calls became less stressful. Absolute time spent consulting was marginally increased, but this was offset by my greatly heightened sense of wellbeing, both during and after surgeries. Secondly, there were the effects on receptionists and partners. Flexibility was not lost and it became easier to give extra appointments without inconveniencing booked patients. Reduced waiting times brought a greater sense of calm at the reception desk, and after about three weeks both my partners changed to the 10 minute system. Two years later we all remain happy with the changes.

What have I learnt? I think that I am a little more effective and efficient as a general practitioner when I can offer adequate time to patients rather than feel that I have to offer them another appointment. We should acknowledge the enhanced value to patients of contented doctors who feel positive about their consulting arrangements. I have learnt that when an idea seems sound but meets with resistance early in negotiation it can be worthwhile persisting with it on a limited basis if it attracts any support at all.—DONALD MOWAT *is a general practitioner in Montrose*

1 Heaney DJ, Howie JGR, Porter AMD. Factors influencing waiting times and consultation times in general practice. *Br J Gen Pract* 1991;41: 315-9.