Authors' objectives
To determine whether financial incentives increase patients' compliance with healthcare treatments.

Searching
A search of computer databases (MEDLINE, EMBASE, PsycLIT, EconLit, and the Cochrane Database of Clinical Trials) plus the reference lists of retrieved articles. Authors and the members of the health economics mail base were contacted.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs). Studies had to include a group in which there was no financial charge to the patient. Studies had to provide adequate information on study design, target population, response rates and outcome.

Specific interventions included in the review
Financial incentives to enhance patient compliance, defined as money, cash, or vouchers redeemable for other goods (food, clothes, gifts, etc). Excluded are reimbursement payments such as travel expenses.

Participants included in the review
Patients attending various clinics, for antituberculosis treatment, dental care for children, paediatric outpatient clinic, postpartum appointments among indigent adolescents, cocaine dependency treatment, and antihypertensive treatment. The majority of studies targeted low income patients, or other disadvantaged groups, including immigrants and the homeless.

Outcomes assessed in the review
Patient compliance, defined as the extent to which a patient's behaviour coincides with medical advice.

How were decisions on the relevance of primary studies made?
Two reviewers independently screened article titles and abstracts for relevance and any disagreement was resolved by consensus.

Assessment of study quality
Study quality was not assessed formally but it was noticed that included studies did not indicate whether the randomisation process was concealed. Study quality was not assessed formally.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
Considering differences in study population and incentives among the included studies, results of individual studies were not quantitatively combined. It seems that the vote-counting method was used. Odds ratio greater than 1.0 indicated improved compliance in the incentive group.

How were differences between studies investigated?
Results of the review

Eleven randomised studies (1,010 patients in the incentive groups and 1,711 in the control groups) were included.

All 11 studies were conducted in the United States and published from 1976 to 1996. 10 of the 11 studies showed that some form of financial incentive promoted compliance better than any alternative (6 of the 10 positive studies achieved statistical significance, p<0.05). A non-financial method of increasing compliance achieved a better result in only one study (OR 0.9, 95% CI: 0.2, 2.4). No study compared different amounts of monetary incentive. However, one study showed that free milk coupons for teenage mothers worked better than a free gift for the mother.

Cost information

Financial incentives can be more cost effective than alternative interventions. Authors stated that the cost-effectiveness of increasing compliance by whatever means will also depend on whether the extra compliance is worth the extra cost.

Authors' conclusions

Financial incentives can improve patient compliance. However, the results need to be confirmed by well designed randomised trials in countries outside the United States.

CRD commentary

The literature search seems comprehensive. The inclusion criteria were clearly described and the details of individual studies presented. Although the study validity was not formally assessed, the authors examined randomisation procedure of trials, and also revealed that prior power calculation was not carried out in the included trials. It should be noted that positive study in this review was defined as those in which odds ratio was greater than 1.0, without considering the result (e.g., p value) of statistical test. The sample sizes of the included studies are very small, and the risk of publication bias may be considerable. Review's conclusions seem appropriate.

Implications of the review for practice and research

Because all available evidence came from studies conducted in the United States, the authors suggested that well designed randomised trials are needed in other countries to confirm the effectiveness of financial incentives to enhance patient compliance.

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Bibliographic details


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http://bmj.com/cgi/content/full/315/7110/703

Other publications of related interest

This additional published commentary may also be of interest. Silverman J. Financial incentives can improve patient compliance with treatment. Evidence-Based Health Policy and Management 1998;2:58.
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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.