A useless raffle

A K MORTAGY, J B L HOWELL AND W E WATERS

From Medicine I and Community Medicine and Medical Statistics, Southampton General Hospital, Southampton SO9 4XY

SUMMARY A mailed questionnaire was sent to 2712 subjects asking about respiratory symptoms, and a raffle for three prizes of £50, £30, and £20 was organised. The response rate in the 1762 who were told about the raffle was no higher than for 950 subjects who served as controls.

In many epidemiological studies to obtain data from individual members of the population, questionnaires are used. Mailed self administered questionnaires are relatively inexpensive for large population studies but lack a good response rate compared to personal interviews. Although return rates of 40 to 60% are considered common for such studies¹ a much higher rate of return is usually needed if useful epidemiological conclusions are to be drawn from the data. A number of attempts have been made to improve the response rate,²⁻⁵ and this paper evaluates the effect of a raffle, with £100 prize money, on the response to a mailed questionnaire on respiratory disease.

Methods

A mail survey, conducted between December 1980 and February 1981, investigated respiratory symptoms in a sample of 2712 persons selected from the current electoral registers in Southampton and in the New Forest. A seven page questionnaire covered personal information; breathlessness; wheezing; cough; phlegm; hyperirritability of the bronchi; family illness; smoking habits and drug treatment. Most questions requested a 'Yes' or 'No' answer. The questionnaires were sent with a covering letter, explaining the purpose of the study, and a second class prepaid business reply envelope.

In an attempt to increase the response, a raffle was arranged with three prizes of £50, £30, and £20, but this was announced in the covering letter to only two thirds (1762) of the sample. The remaining one third (950), sampled on a random basis, did not know about the raffle although they were in fact included in the draw. If no reply had been received after four weeks, a reminder was sent which did not mention the raffle to either group but included another copy of the questionnaire and another prepaid business

reply envelope. The draw for the winners was made by one of the respondents, and the numbers were announced in the local newspaper.

The Post Office returned 120 letters (6.8%) of the 'Raffle' group as Dead or Left Area and 50 (5.3%) from the control group.

Results

After the exclusion of those known to have died or moved from the survey areas, a reply was received to the first mailing from 56.6% of those who were told about the raffle and 54.2% of those who were not told. After the second mailing a further 16.5% responded from those who knew about the raffle and 17.7% from those who did not, giving total responses of 73.1% and 71.9%. None of these differences is statistically significant (at $p < 0.05$). If the response was calculated using the total numbers of questionnaires sent, the response was 68.1% when the raffle was mentioned and 68.1% when it was not mentioned.

Effect on response of knowing about raffle

	Knew about raffle		Did not know about raffle	
	N	%	N	%
Questionnaires sent	1762	100.0	950	100.0
Dead or left area	120	6.8	50	5.3
Presumed received	1642	100.0	900	100.0
Response to first mailing	929	56.6	488	54.2
Response to second mailing	271	16.5	159	17.7

Discussion

Financial reward is thought to be a way of increasing the response to postal surveys. In the United States, a sum of 25 cents (many years ago) was found to yield a substantial increase in response.² In an uncontrolled study, a return rate of over 85% was achieved in a survey of sexual and affectional practices which included a preliminary telephone call and enclosed a dollar bill with the questionnaire.⁵ In the present study, a raffle was used as it appeared to present a substantial inducement, yet at a modest cost compared with sending money to every subject in the sample. A control group who did not know about the raffle was included to evaluate the effect of the raffle, both groups receiving otherwise identical letters and questionnaires. So confident were some of the researchers that two thirds were included in the group that received notice of the raffle. The result was disappointing and the failure of the raffle to increase significantly the response may have been due to several factors. Some may have resented the

principle of a lottery and one telephone complaint was received. Others might have thought that their motives for cooperation would be considered to be purely financial and not to help medical research. Overall the response rates were 68·1% whether or not the raffle was mentioned. We do not know if a larger sum would have increased the response but this would have made the procedure more expensive than sending a second reminder.

References

- ¹Bennett AE, Ritchie I. *Questionnaires in medicine*. London: Oxford University Press, 1975.
- ²Moser CA, Kalton G. *Survey methods in social investigation*. London: Heinemann Educational, 2nd edition 1971.
- ³Scott C. Research on mail surveys. *J Roy Statist Soc, Series A*. 1961; **124**: 143–205.
- ⁴Newland CA, Waters WE, Standford AP, Batchelor BG. A study of mail survey method. *Int J Epidemiol* 1977; **6**: 65–7.
- ⁵Rosenfeld AA. Increasing questionnaire response. *Am J Psychiatry* 1979; **136**: 1480–1.