

Increasing Response Rates in Physicians' Mail Surveys: An Experimental Study

BRIGITTE MAHEUX, MD, PhD, CLAUDINE LEGAULT, MSc, AND JEAN LAMBERT, PhD

Abstract: It is becoming increasingly difficult to obtain high response rates in physicians' mail surveys. In 1983-84, we tested the effectiveness of two techniques among 604 Quebec physicians who had not responded to an initial letter. A handwritten thank you note at the bottom of the letter accompanying the questionnaire and a more personalized mailout package increased response rates by 40.7 per cent and 53.1 per cent, respectively, compared to control groups. (*Am J Public Health* 1989; 79:638-639.)

Introduction

Epidemiologists, health administrators, and other public health professionals often rely on mailed questionnaires to obtain data from physicians. Mailed questionnaires cost less than interviews, are more convenient for the physicians, and allow less socially desirable responses.¹⁻⁴ The major disadvantage is the low response rate with the attendant problem of non-response bias.⁵⁻⁷

Many variables have been shown to influence physician response to mailed surveys. These variables include questionnaire length and format,⁸⁻⁹ postage,⁹ characteristics of investigator,¹⁰ follow-up mailings,¹¹ and rewards.¹² In the study reported here, we experimentally tested the effectiveness of two relatively inexpensive procedures on physicians' response rates to a follow-up letter: 1) a handwritten post-scriptum on the cover letter thanking the physician personally for participating in the study; and 2) a more personalized mailout package. Because of the small amount of time physicians have to answer the huge volume of mail they receive, we hypothesized that the two techniques would be more likely to catch physicians' interest and result in better response rates.

Methods

The experiment was conducted during a 1983-84 mail survey of a stratified sample of Quebec physicians (729 general practitioners and 379 specialists) aimed at determining the level of physicians' support for a number of patient care issues. The 70-item closed-ended questionnaire took about 20 minutes to complete. The data collection took place over six months and included four mailings, two of which served for the experimental study reported here.

At the first mailing, all physicians received a cover letter, the questionnaire, and a postage-permit return envelope sent first class in an outgoing metered envelope. We addressed the envelopes with a computerized self-adhesive address label with the last name first.

Address reprint requests to Dr. Brigitte Maheux, Associate Professor, Department of Social and Preventive Medicine, Université de Montréal, C.P. 6128, Succ. A, Montréal, Québec, Canada H3C 3J7. Dr. Lambert is also an associate professor in that department; Ms. Legault is a doctoral student in biostatistics at the University of North Carolina School of Public Health. This paper, submitted to the *Journal* December 28, 1987, was revised and accepted for publication August 10, 1988.

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Nonrespondents to the first mailing were randomized into two groups. About half of the subjects received with the questionnaire a follow-up letter with a handwritten post-script which read as follows "Thank you, Doctor X, for your participation in the study." The other half received the same letter but no handwritten thank you note in the post-scriptum.

Nonrespondents to the second mailing were again randomized into two groups. One group was sent a mailout package which, instead of using the computerized address label with the last name first, had the physician's name and address individually typed onto the envelope with title preceding name (e.g., "Doctor John Smith" instead of "Smith, John"); 2) the outgoing envelope was identified to the university rather than to the survey title; 3) the outgoing envelope was handstamped rather than metered; and 4) the postage permit return envelope was replaced by a hand-stamped return envelope. The control group received the same mailout package as the one used earlier. As suggested by Dillman,¹³ the data collection process was completed by a fourth mailing.

Results

Both techniques were effective in increasing physicians' response rates (Table 1). The handwritten post-script increased response rates by 40.7 per cent since 30.4 per cent of physicians in the handwritten post-scriptum treatment group responded compared to 21.6 per cent in the control group. The personalized mailout package proved even more effective: 39.5 per cent of physicians who were sent a personalized mailout package responded compared to 25.8 per cent for the control group. This represents an increase of 53.1 per cent.

Although specialists did not respond as well as general practitioners, they seemed somewhat more sensitive to the experimental variables (Table 1). In both experiments, the difference in response rates between the experimental and control groups was somewhat higher for specialists than for generalists.

Discussion

Achieving high response rates in physicians' mail surveys is often a challenge. Rates below 70 per cent are often reported in the literature.¹⁴⁻¹⁷ In this study, we were able to improve physicians' response rates by using two relatively inexpensive techniques of personalizing the mailed questionnaire. The handwritten thank you note at the bottom of the letter accompanying the questionnaire increased physicians' returns by 40.7 per cent whereas the personalization of the mailout package proved even more effective, increasing returns by 53.1 per cent.

The techniques were more effective among physicians less interested in the survey topic (the specialists). Although one cannot exclude a regression to the mean effect, the results may suggest that specialists were particularly sensitive to efforts made to gain their collaboration.

TABLE 1—Response Rates after Each Mailing: Physicians' Survey, Quebec, 1983–84

Mailing	Experiment	Generalists				Specialists				Total			
		n	% RR	% CRR	Difference (95% CI)	n	% RR	% CRR	Difference (95% CI)	n	% RR	% CRR	Difference (95% CI)
First Second	No	729	51.2	51.2		379	34.6	34.6		1108	45.5	45.5	
	Yes	356	28.9	65.3		248	21.4	48.6		604	25.8	59.6	
	PS ⁺	170	32.9		7.6	119	26.9		10.6	289	30.4		8.8
	PS ⁻	186	25.3		(-1.8, 17.0)	129	16.3		(0.4, 20.8)	315	21.6		(1.8, 15.8)
Third	Yes	253	39.5	79.0		195	23.6	60.7		448	32.6	72.7	
	PER ⁺	126	46.0		12.9	97	30.6		14.6	223	39.5		13.7
	PER ⁻	127	33.1		(1.0, 24.8)	98	16.3		(2.9, 26.3)	225	25.8		(5.1, 22.3)
Fourth	No	153	24.2	84.1		149	21.5	69.1		302	22.8	78.9	

RR: Response rate

CRR: Cumulative response rate

PS⁺: Group exposed to the handwritten post-scriptumPS⁻: Control groupPER⁺: Group exposed to the personalized mailout packagePER⁻: Control group

Even though personalization was undoubtedly effective in increasing physicians' returns, it is unclear why it worked. It is likely that it plays at different levels by increasing the probabilities that physicians will open the mailout, read the cover letter, and accept to complete the questionnaire. As others have emphasized,^{18,19} more research is needed to understand the principles underlying people's behavior in relation to mailed questionnaires and to uncover significant interaction among survey techniques, survey content, and population.

It has been suggested that personalization in mail surveys can be counterproductive under certain circumstances, especially when it raises doubts in subjects' minds about the anonymity of their responses.^{20,21} This study shows that it can be very effective if used appropriately. In physicians' mail survey, personalization is a technique that should be considered, particularly in follow-up mailings.

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