Proceedings of Statistics Canada Symposium 2001
Achieving Data Quality in a Statistical Agency: A Methodological Perspective

REPORT OF TESTS OF STRATEGIES TO INCREASE RESPONSE RATES FROM PHYSICIANS

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ABSTRACT

For a survey of generalist and specialist physicians, the method of delivery (regular vs priority USPS mail) and notification of inclusion in a drawing for cash prizes were randomized using a 2x2 factorial design. While neither priority delivery nor notification of a cash prize drawing for respondents sufficiently overcame whatever obstacles to response exist in this population, both approaches had a positive, though limited, effect on the response rate. A subsequent mailing of a prepaid cash incentive delivered by courier was particularly effective in increasing the representativeness of the generalist subsample.

KEY WORDS: Response Rates; Physicians; Incentives

1. INTRODUCTION

Researchers are concerned about a continuing trend toward declining numbers of response to surveys from both the general population (Groves & Couper 1998) and from specific populations, such as physicians (Asch, Jedrziewski & Cristakis 1997). This concern is justified because, all things being equal, the higher the response rate from a sample, the greater the confidence in the generalizability of the data to the larger population. In addition to improved data quality, higher response rates, particularly from early responders, can reduce the costs for data collection.

Some subgroups, such as primary care physicians, are considered particularly challenging to survey. Although specialist doctors, when asked about topics that are particularly salient to them, have demonstrated adequate rates of response, generalist doctors have proven to be a harder-to-reach population. In a study comparing specialist physicians' treatment recommendations for prostate cancer, the response rate for urologists was 64% and 76% for radiation oncologists (Fowler et al. 2000). However, in a survey of physicians' knowledge about drugs for myocardial infarction, response rates from generalists (family practitioners and internists) hovered around 40%, while response rates from specialists (cardiologists) averaged about 85% (Ayanian et al. 1994).

Methods that have proven helpful in motivating physicians to participate in survey research include: the use of shorter questionnaires (Marin & Howe 1984); questionnaire items with fixed response choices as opposed to open-ended questions (Griffith et al. 1999); including an offer of entry in a lottery (Baron, De Wals & Milord 2001); and enclosure of a prepaid financial incentive (Berk, Edwards & Gay 1993; Donaldson et al. 1999). While special delivery, via Federal Express, of the questionnaire packet has been shown to increase response from physicians relative to first class delivery by the United States Postal Service (U.S.P.S.)

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[3]Funding for this study was provided by the Agency for Healthcare Research and Quality and the American Association of Health Plans Foundation.

(Kasprzyk et al. 2001), to our knowledge there are no published data about the relative effectiveness of priority mail compared to regular mail.

For a study involving a sample of physicians that included general practitioners and specialists, we were interested in testing data collection methods to enhance response rates across both groups. The original data collection protocol called for a 2x2 factorial design, where both method of delivery (regular vs priority U.S.P.S. mail) and notification of respondents' inclusion in a drawing for cash prizes were varied.

While the study design originally called for a single mailing followed by telephone reminder calls, the less than satisfactory response rate at the close of the mail and telephone/web phase led to a decision to contact nonrespondents once more. Interviewers making the reminder calls reported that in many cases it was difficult to get past the physicians' gatekeepers. The interviewers left reminder messages for physicians whenever possible, but a number of receptionists reported that there was a "blanket" clinic policy against physicians participating in surveys while on duty and that no messages would be relayed. In the hopes of getting the instrument into the hands of potential respondents and having the physicians seriously consider responding to the survey, a pre-paid $20 cash incentive was included in the replacement questionnaire packets sent special delivery via Federal Express to nonrespondents. This paper reports methodological findings from this survey of physicians.

1.1 Background

This study, the Effects of Managed Care on Patients with Diabetes and Hypertension, was initiated by Harvard Medical School, Department of Health Care Policy, in collaboration with the Healthcare Education and Research Foundation, Inc. (HERF), St. Paul, Minnesota. HERF is a non-profit, independent healthcare improvement organization that works with physicians and healthcare organizations to improve the quality of care provided to patients in Minnesota. The goal of the study was to examine the features of health plans and how they relate to quality of care provided to patients diagnosed with diabetes mellitus (DM) and/or hypertension (HTN). Patients and their physicians, identified through chart review, were surveyed for this study. The results from the physician portion of the project are the focus of this paper.

2. METHODS

2.1 Questionnaire Design

The physician survey instrument was developed to measure management and practice arrangements of physicians, diagnosis-specific indicators of quality of care, and physician demographics. Diagnosis-specific sections were developed for physicians to report their experiences with patients. Screening questions allowed physicians who did not treat patients with one or both of the target diagnoses to skip over sections that did not apply. The 63-item instrument was formatted for interviewer administration by computer-assisted telephone interview (CATI) and self administration either by mail (12 pages) or electronically on a website.

2.2 Study Population

Eligible physicians were identified through administrative claims data for patients enrolled in three managed care health plans in Minnesota. Physicians practicing in Minnesota who had treated any member of the patient sample in the year prior to the sampling date were considered eligible. A sample of 1175 physicians was created: 85% generalist physicians (family practitioners and internists); 4% specialists (cardiologists, endocrinologists and oncologists); 7% residents; and 4% physicians whose specialty could not be ascertained from administrative records.

2.3 Data Collection Procedures

Information was collected using a multi-mode protocol, whereby nonrespondents to the initial mailing of questionnaire packets were contacted and offered the opportunity to complete either a telephone interview or the web version of the survey. Replacement questionnaires were delivered to all nonresponding doctors. Data were collected during the fall and winter of 1999-2000.

2.3.1 Protocol for the Initial Mail Contact.

Sampled physicians were mailed a questionnaire packet containing a single instrument with questions about their management of diabetic and hypertensive patients. The questionnaire packets contained individualized introductory letters on HERF stationery informing potential respondents of the purposes of the survey and indicating HERF's endorsement of the study. This letter was signed by the Executive Director of HERF and a physician considered to be an opinion leader in the Minnesota medical community. The cover letters included a request that those who preferred not to participate return a blank questionnaire. A postage-paid envelope in which to return the completed instrument was provided.

To test two approaches to delivering the questionnaire packet, a methodological study employing a factorial design was embedded within the initial mailing protocol for this study. A random half of the sampled physicians was sent the packet via Priority United States Postal Service (USPS) mail and the other half was sent the packet by regular USPS mail. In addition, only half of the sampled physicians were notified in the introductory letters that respondents would be eligible for a drawing of one of three $500 prizes.

2.3.2 Telephone Protocols. About two weeks after the initial mailing, professional interviewers started placing reminder telephone calls to the offices of physicians who had not yet responded. Trained, professional interviewers from CSR placed calls to the offices of nonrespondents to remind physicians to return the questionnaires and to offer them the opportunity to either complete an interview on the telephone or by access to a website. At least six call attempts were made at various times of the day and on different days of the week.

2.3.3 Internet Protocols. The physician instrument was formatted for use on a secure web-site. Each case was assigned a personal identification number (PIN) to use to access the site. During the telephone phase, physicians who indicated their interest in responding via the internet were given the website address and their individual PIN.

2.3.4 Replacement Mailing Protocols. When response to the initial mailing and follow-up phone calls offering telephone or web-site administration of the interview proved unsatisfactory, it was decided that a change in protocol was warranted for the second mailing all sample members who had not responded by the end of the telephone reminder phase were sent a questionnaire packet via FedEx with a $20 bill attached to the cover letter. In this mailing, all cover letters contained a statement that respondents would be eligible for a drawing for three $500 prizes. All physicians who had responded prior to the FedEx mailing were also sent $20 to thank them for their participation.

In preparation for the second round of mailings, calls were placed to the doctors' offices to determine if the sampled physicians were still employed at the clinics; if not, to try to obtain forwarding addresses, and if so, to confirm the mailing addresses. During these calls, it was learned that some of the physicians had retired and others, who had been residents at the time the sample was created, had moved on. The cover letters for the second mailing were tailored to match physicians' situations; one version of the cover letter contained wording for those who had retired, another for those who had moved, and a third for all others.

3. FIELD RESULTS

3.1 Response to Initial Mailing Prior to Telephone Contact

To gauge the effects of the experimental conditions tested net of any influence that the reminder calls may have had, response rates to the initial mailing prior to any telephone contact were calculated. The response rate is calculated as the proportion of all eligible cases responding. Those for whom good contact information was not available are considered eligible (AAPOR 2000). Ineligible cases include those who were confirmed to be a physician's assistant or nurse practitioner, or deceased.

Using regular mail without the incentive of a cash prize drawing tended to be the least productive of the methods tested, but there were no statistically significant differences in response rates across experimental conditions. The overall response rate to this first wave of contact was 11%. Table 1 outlines the outcomes of the variations in method of delivery and notification of eligibility for a cash drawing tested during the initial mailing.

Table 1. Response Rates by Experimental Condition
(Prior to telephone reminder calls)

Experimental Condition	Eligible Sample*	Completed Questionnaires	Response Rate
Priority Mail-Drawing	290	32	11.0%
Priority Mail - No Drawing	291	36	12.4
Regular Mail -Drawing	293	37	12.6
Regular Mail -No Drawing	288	25	8.7
TOTAL	1162	130	11.2%

* Sample members determined to be physician's assistants, nurse practitioners, or deceased were ineligible.

3.2 Response to Telephone Reminder Calls and Offers of Telephone and Web Alternatives

The cumulative response rate was calculated after calls were placed to the offices of physicians who had not responded to the first round of mailing to remind them to complete the survey and to offer either a telephone or web-based alternative to the mail questionnaire. Just one physician requested the web address and PIN number, but did not respond using that mode. Only 3 physicians, all family practitioners, chose to complete a telephone interview. Two weeks after the last reminder call was placed, the total cumulative response rate was 21.8%.

Interviewers noted that it was harder to contact this sample of physicians than had been their experience in previous studies involving physicians. They reported that there were more levels of gatekeepers and that many of the practices were large clinics rather than private offices. In other studies involving smaller offices, interviewers had often been able to establish rapport with a particular secretary or receptionist who would facilitate contact with a doctor. They found this difficult to accomplish when the person answering the telephone often changed with each call.

3.3 Response to Special Delivery with Cash Incentive

Special delivery of a prepaid cash incentive in the replacement questionnaire packets increased the response rate from the first two rounds of contact by 35 percentage points. The overall cumulative response rate was 57%, including mail and telephone responses. The third round of contact increased responses from the generalist physicians, family practitioners and internists, from 25% to 63%. As expected, as a group, the specialists were the most responsive; ultimately all but two (95%) of the specialists sampled responded by the close of the field period. But even among these physicians, for whom the focus of the instrument was thought to be more salient than for the other sampled groups, the response rate prior to the special delivery of the cash incentive was less than 30%. See Table 2 for cumulative response rates by specialty and phase in which the questionnaire was completed.

Poor contact information was not a driver of nonresponse in this study of physicians. Less than 1% of the questionnaire packets were returned by the Post Office as undeliverable and we were able to identify correct telephone numbers for just 98% of the cases assigned to the telephone protocols.

Including physicians who returned a blank questionnaire by mail (8%) and proxy and self refusals by telephone (2%), the overall refusal rate 10%. Physicians in residency at the time the sample was created were the most challenging class of doctors to survey. They were difficult to track and even with updated contact information, none of the sampled residents returned a completed questionnaire; 14% actively refused to comply with the survey request. At the same time, none of the specialists and just 7% of the generalists refused to participate.

Table 2.

		Cumulative Response Rates by Specialty and Phase in which Questionnaire Completed		
Specialty	**Eligible Sample*** n	**USPS** % (n)	**Tel Reminder** % (n)	**Fedex with $20** % (n)
Generalist	987	12.3% (121)	24.1% (238)	62.7% (619)
Specialists	41	17.1 (7)	29.3 (12)	95.1 (39)
Resident	84	0	0	0
Not Ascertained	50	4.0 (2)	6.0 (3)	16.0 (8)
Total	**1162**	**11.2% (130)**	**21.8% (253)**	**57.3% (666)**

* Ineligible cases included those determined to be deceased, physician's assistants or nurse practitioners.

It is worth noting that 3% (29) of the physicians who received the $20 incentive during the FedEx mailing, returned the money along with a their blank questionnaires. At the close of the field period, three respondents were randomly selected to receive the $500 prizes. None of these checks were returned.

4. DISCUSSION

While neither Priority delivery or notification of a cash prize drawing for respondents sufficiently overcame whatever obstacles to response exist in this population, both approaches had a positive, though limited, effect on the response rate.

In this study, offering website access to the questionnaire did not turn out to be at all productive. Only one physician logged on to the site, and he chose to respond via another mode. Similarly, the telephone mode was not particularly productive: only 3 telephone interviews were completed. In contrast, the second mailing using FedEx and a $20 incentive contributed to raising the response rate from about 20% at the end of the telephone reminder call phase to a final response rate of 57%. While it is impossible to tease apart the effects of the incentive from the courier delivery without an experimental design, the results of this study suggest that special delivery of a questionnaire packet that includes a cash incentive encourages response from physicians.

The $20 prepaid incentive was intended to accomplish two goals. First, to get the doctors' attention and induce them to look at what they were being asked to do. Physicians are so overwhelmed with requests and paperwork in the current environment that it is understandable that they can only give scant attention to much of the material that arrives, if they don't absolutely have to deal with it. We are virtually certain that the most important effects of the $20 were that secretaries felt obliged to pass along the material to the physicians and physicians felt obliged to at least read what we had to say. The other element that we have found from debriefing many respondents on surveys that offer some kind of gift or remuneration is that respondents feel that they are not being taken for granted when they get something, whether it's money or some other kind of gift. Even though the survey took 15 minutes or less to complete, the $20 incentive didn't adequately compensate the physicians for their time. However, the intention was to demonstrate that we were not asking that they give us something for nothing and that the survey sponsors appreciated the effort that the doctors had to make and the imposition on their time. That kind of impression does help to encourage response to surveys.

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