

What are the optimum survey procedures for supplementing regular mortality statistics? This report presents some results of methodological studies which have been undertaken to develop procedures for querying sources of information identified on death certificates. The survey procedures are evaluated primarily in terms of response rates.

SURVEY PROCEDURES FOR SUPPLEMENTING MORTALITY STATISTICS

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DURING recent years, there have been substantial increases in the uses of vital records for research at the local, state, and national levels. Vital records are often used in retrospective or follow-back studies where the record serves as a focal point in sample surveys for collecting supplementary vital statistics. In these studies, a sample of records is selected from a frame of registered events and the information available from the records is supplemented by information collected by surveys. The supplementary data are usually collected from one or more sources of information identified on the vital record itself.

In the course of conducting several follow-back studies to collect supplementary mortality statistics during the past two or three years, the National Office of Vital Statistics (U. S. Department of Health, Education, and Welfare, PHS) has experimented with survey procedures for conducting these studies.¹ Some results pertaining to survey procedures and response rates are summarized in this report.

The form and content of the official death records in use in the continental United States are determined by the

53 registration areas and therefore vary in certain details. However, these records conform in most essential respects to the standard certificate recommended by the U. S. Public Health Service. The standard death certificate identifies selected persons and institutions which can be utilized as sources of information in follow-back studies. These sources are (1) the funeral director, (2) the physician who certifies the death, (3) the informant who supplies personal particulars about the deceased person for the death record, and (4) the institution in which death occurred.

The results presented in this report are based primarily on two follow-back studies anchored to death records. Response rates and related information pertaining to the physician, informant, and funeral director as sources of information are derived from the Pennsylvania Mortality Study. Information pertaining to the institution of death is based on the Illness Study of Deceased Persons.

The Pennsylvania Mortality Study was undertaken collaboratively by the National Office of Vital Statistics and

the National Cancer Institute of the U. S. Public Health Service in cooperation with the Pennsylvania State Department of Health.² It was primarily a methodological study to develop technics for collecting supplementary mortality statistics from physicians and informants by survey methods. It also served as a pilot study for an epidemiological investigation involving air pollution, the use of tobacco, and exposures in selected occupations in relation to deaths from lung cancer and other selected diseases. The sample contained about 1,700 deaths selected from those registered in the state of Pennsylvania during the three-months, August-October, 1956. It was designed to give adequate coverage of the principal causes of death by age, sex, and race. Information collected from physicians included the diagnostic procedures on which the causes of death were based.³ Information about the smoking habits, residence history, and the job history of the deceased persons was collected from informants. The funeral director was queried to identify the certifying physician or the informant (or substitute person) in the event that these sources could not be identified from the death certificate.

The Illness Study of Deceased Persons was undertaken by the National Office of Vital Statistics for the National Health Survey Program. It was a pilot investigation of methodological and other problems involved in obtaining data on the hospital and medical services received by decedents during the 12-month period prior to death. A representative sample of about 700 deaths (one-fortieth of the deaths occurring in the Middle Atlantic States during April, 1957) was selected for the study. Information about hospital care and services rendered to the deceased person was collected from the institution of death and from other hospitals in which it was ascertained

that the deceased had received care.

Procedures for collecting data from sources identified on the death certificate were initiated with a mail survey. Follow-up actions by mail and if necessary by other means were undertaken with nonrespondents. Response rates to initial mailing and subsequent follow-up actions will be reported separately for each of the sources of information in the four sections which follow. There will be frequent reference to the response rate after the first mail survey and to the cumulative response rates after the mail follow-up and after all other follow-up actions. For convenience, the following definitions have been adopted:

1. Initial response rate—response rate to the original mail survey;
2. Final mail response rate—response rate after completion of the "follow-up mail" actions;
3. Total response rate—response rate after completion of "all follow-up" actions.

Unless otherwise indicated, the response rates give the percentage of questionnaires returned without regard to the extent of their completion.

Funeral Director Response Rates

The funeral director was asked to identify an informant (1) whenever the name and/or address of the informant was unavailable or could not be read from the death certificate, or (2) whenever a letter was returned because it was undeliverable by the post office. The funeral director was queried for all cases in which the death certificate was signed by a hospital record librarian. A request for the identification of a physician was made only occasionally because the Pennsylvania Department of Health assisted in identifying physicians on the death certificate. In addition, the American Medical Directory was searched before a referral was made to this organization.

Three mailing actions were used in the Pennsylvania Mortality Study to elicit responses from funeral directors. The first query was sent by regular mail. If a reply was not received within ten days, a regular mail follow-up was sent. A second follow-up to nonresponding funeral directors was mailed ten days later using certified mail.

The total number of funeral directors queried in the Pennsylvania Mortality Study was 328, about 19 per cent of the sample of 1,731. The final mail response rate of 99 per cent for funeral directors was obtained by the steps shown in Table 1.

Two conclusions are evident regarding response from funeral directors: (1) The total response rate was nearly 100 per cent, and (2) initial response accounted for a large proportion of the total response. The latter fact has important implications in terms of cost. It should also be noted that identification of a source was obtained in 92 per cent of the queried cases. A query was returned without identification in 6 per cent of the cases and in 2 per cent the funeral director did not supply the requested information.

Table 1—Response Rates for Funeral Directors by the Action which Elicited the Response: Pennsylvania Mortality Study

Action Eliciting Response	Per cent	Cumulative Per cent
Nonresponse	1	
Response	99	
Original mail query	78	78
Regular mail follow-up	16	94
Certified mail follow-up	5	99
Sample size: 328		

Physician Response Rates

The mailing actions for physicians were similar to those used with funeral directors. In order to test the effect of two alternative follow-up actions on nonresponding physicians, however, different series of mailing procedures were used for two randomly selected groups of physicians. Physicians in the first group received a regular mail query first. If a reply was not received within 12 days, a certified mail follow-up was sent. If a query had not been returned at the end of 24 days from the time the original form was mailed, the case was turned over to either the Bureau of the Census or the Western Union Telegraph Company for a telephone reminder.* In the second group, three follow-up actions were used to elicit responses from nonresponding physicians: a regular mail follow-up, a certified mail follow-up, and a telephone reminder interview.

Physician response rates are summarized in Table 2 where they are distributed according to the two procedures which were tested for conducting follow-up actions on nonrespondents to the original mail query. Although the total response rates for the two procedures hardly differ, there is a significant difference at the 1 per cent level in the final mail response rates between the two procedures. The final mail response rate to the procedure consisting of only one mail follow-up was 92 per cent, as compared with a 96 per cent response rate for the procedure with two follow-up mailing actions. It is noteworthy, however, that the physician response rates to the first follow-up actions

* Representatives of these organizations, working through their branch offices in the state of Pennsylvania, conducted telephone reminder interviews with physicians. In the interview, the physician was requested to return the form to the National Office of Vital Statistics as soon as possible. No attempt was made to obtain diagnostic information from the physician over the telephone.

Table 2—Response Rates for Physicians by Procedures Used to Collect Data and the Action Which Elicited the Response: Pennsylvania Mortality Study

Action Eliciting Response	Procedure 1		Procedure 2	
	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent
Nonresponse	3		2	
Response	97		98	
Original mail query	60	60	65	65
Regular mail follow-up	*	*	21	86
Certified mail follow-up	32	92	10	96
Telephone reminder	5	97	2	98
Sample Size:		872		859

* Follow-up action was not attempted.

were augmented as a result of sending queries by certified mail rather than by regular mail. The response rate was 92 per cent for physicians receiving a certified mail follow-up and 86 per cent for those for whom the first follow-up action had been by regular mail.

Response rates were also investigated in terms of characteristics of physicians. In Table 3, the initial and total response rates are shown for four variables: age of physician, population size of physician's place of practice, type of certifier, and specialty of physician. The total response rates were not significantly different at the 5 per cent level for any of the characteristics tested. However, the initial response rates were significantly different for three of the four variables: younger doctors responded later than older physicians; regular certifiers responded later than medicolegal certifiers; and physicians practicing in cities of 50,000 or more population responded later than physicians practicing in other places.

Response from physicians in the Pennsylvania Mortality Study can be summarized as follows: (1) the total response rate was 97 per cent, (2) the higher final mail response rate was elicited by the procedure in which two

follow-up actions were employed, a regular mail query and a certified mail query, as compared with a procedure in which a single certified mail follow-up was used, and (3) the total response rate was high regardless of the selected characteristics of physicians which were tested, although there were significant differences in the initial response rates according to the characteristics of physicians.

Informant Response Rates

The Experimental Design

Three experiments were incorporated into the study design of the Pennsylvania Mortality Study in order to test alternative procedures for collecting data about decedents from family informants. The experiments are outlined in Table 4.

Experiment 1 was designed to test the effect of using various combinations of follow-up actions (e.g., regular mail, certified mail, personal interview) for eliciting queries from nonresponding informants residing in standard metropolitan areas. A regular mail query was sent in the initial mailing to all informants; three follow-up procedures

were devised to determine the most effective actions to be taken for those informants who failed to return this query. Procedure 1 consisted of two follow-up mailing actions: a regular mail follow-up and a certified mail follow-up. Fourteen days were allowed to elapse between follow-up mailings. Procedure 1 was used on one-third of the informants. To test response to combinations of regular mail, certified mail and a personal interview, two procedures were designed for the remainder of the informants. Procedure 2 consisted of two follow-up actions after the original query had been sent: a regular mail follow-up and a personal interview. Two follow-up actions were also used for Procedure 3. However, a certified mail follow-up was substituted for the regular mail follow-up.

The purpose of Experiment 2 was to test response to two types of covering letters sent with the initial mail ques-

tionnaire. Both letters explained the purpose of the study and instructed the person receiving the questionnaire to complete the form and return it as soon as possible. However, the general tone of one letter, designated as the Firm Covering Letter, was more authoritarian than that of the other, the Permissive Letter. The Firm Covering Letter was written in a matter-of-fact manner, and stated that, "Your health department requests that you complete the form and return it within the next few days. . . ." The permissive version requested that the informant "help us in this study. . . ." A Firm Covering Letter was sent with one-half of the questionnaires mailed during September and a Permissive Covering Letter was sent with the other half. Regardless of the type of covering letter sent with the initial mailing, a letter resembling the Firm Covering Letter was sent with follow-up mailings. Reproductions of the informant letters

Table 3—Comparison of Response Rates by Selected Characteristics of Physicians: Pennsylvania Mortality Study

Characteristic of Physician	Sample Size	Initial Response Rate		Total Response Rate	
		Response Rate	Difference Significant at 5% Level	Response Rate	Difference Significant at 5% Level
1. Age					
Less than 40 years	427	57		96	
40 years or more	976	65	Yes	98	No
Age unknown	328				
2. Population Size of Place of Practice					
Less than 50,000	825	67		98	
50,000 or more	906	59	Yes	97	No
3. Type of Certifier					
Attending certifier	1,594	59		96	
Coroner or medical examiner	137	77	Yes	99	No
4. Speciality of Certifier					
Specialist	225	61		97	
Nonspecialist or speciality not ascertained	1,506	62	No	97	No

Table 4—Design of Survey Experiments to Test Procedures for Collecting Data from Informants: Pennsylvania Mortality Study

Experiment and Purpose	Experimental Procedures	Composition of Experimental Groups
Experiment 1 Purpose: To test the effect of using various combinations of follow-up actions for eliciting queries from nonrespondents	Procedure 1 Regular mail follow-up and certified mail follow-up	One-third of informants living in SMA's*
	Procedure 2 Regular mail follow-up and personal interview	One-third of informants living in SMA's
	Procedure 3 Certified mail follow-up and personal interview	One-third of informants living in SMA's
Experiment 2 Purpose: To test response to a Permissive and a Firm Covering Letter	Permissive Covering Letter	One-half of all death certificates in September sample
	Firm Covering Letter	One-half of all death certificates in September sample
Experiment 3 Purpose: To test response to a long and a short query	Smoking Query	One-half of all death certificates for male decedents in October sample
	Regular Query	One-half of all death certificates for male decedents in October sample
Experiment 3(a): Smoking Query versus Regular Query	Regular Query	All death certificates for female decedents in October sample
	Residence Query	One-half of all death certificates in November sample
Experiment 3(b): Residence Query versus Regular Query	Regular Query	One-half of all death certificates in November sample

* SMA (standard metropolitan areas).

used in the Pennsylvania Mortality Study are shown here:

Specimen Letters

Permissive Covering Letter

The Pennsylvania Department of Health is cooperating with the United States Public Health Service in a research program on air pollution and smoking as health hazards. It is important to gather information about the smoking habits and the residence and occupa-

tion histories of persons who died recently, and we are asking relatives or close friends to give us this information.

Will you help us in this study which we hope will give results of importance to the future health of your friends and relatives.

The person whose name appears on the first page of the enclosed form is one of many persons who died recently in Pennsylvania selected for this study. Since you supplied the information about the deceased for the death certificate, I hope you will help us in this study by answering the questions on the enclosed form. If you can not answer some of

them, perhaps you can think of someone who can help you do so. When completed, the form should be mailed in the addressed envelope which requires no postage. Your reply will be confidential and will be used for research purposes only.

Your cooperation in supplying these facts would be gratefully appreciated.

Firm Covering Letter

The Pennsylvania Department of Health is cooperating with the United States Public Health Service in a research program on air pollution and smoking as health hazards. Information is needed about the smoking habits and the residence and occupation histories of persons who died recently. Accordingly, we are asking you to answer some questions concerning a person about whom you supplied information for the death certificate.

The person about whom you are being requested to answer questions is one of many persons who died recently in Pennsylvania selected for this study. The name of the person appears on the first page of the enclosed form. Your Health Department requests that you complete the form and return it within the next few days in the addressed envelope which requires no postage. If you can not answer some of the questions, perhaps you can think of someone who can help you do so. Your reply will be confidential and will be used for research purposes only.

Follow-up Letter

Recently, we sent you a letter requesting information about a person whose name appears on the enclosed form. According to our records, we have not yet received your reply. You are therefore requested to complete the enclosed form and return it within the next few days in the addressed envelope which requires no postage.

The Pennsylvania Department of Health is cooperating with the United States Public Health Service in a research program on air pollution and smoking as health hazards. Information is needed about the smoking habits and residence and occupation histories of persons who died recently. The person about whom you are being requested to answer questions is one of several persons included in this study who died recently in Pennsylvania. It is important to get information about each person so that the results of the study will be reliable. If you can not answer some of the questions, perhaps you can think of someone who can help you do so. Your reply will be confidential and will be used for research purposes only.

Experiment 3 compared response to a long questionnaire with response to a shorter version. The long form, designated hereafter as the Regular Query, requested smoking, residence, and occupation information about the decedent. Two short forms were used, one asking for information about the decedent's smoking habits (Smoking Query) and the other requesting information about the deceased person's residence history (Residence Query). The Smoking Query was sent to one-half the informants in the October sample who signed death certificates for male decedents. The remaining informants received the Regular Query. The Residence Query was tested during November, 1956. The queries selected for mailing during that month were randomly divided into two approximately equal groups; one group received a Regular Query and the other a Residence Query.

Analysis of Experiment 1

Informant response rates are distributed in Table 5 by the action which elicited the response and the types of follow-up procedures tested on nonrespondents. The following observations regarding informant response rates may be made:

1. The highest response rates were obtained for procedures which included a personal interview follow-up.
2. The certified mail follow-up augmented the response rates.*

* Response rates to the first follow-up letter were significantly different for Procedure 1 and Procedure 2, although both follow-up letters were sent using regular mail. The reason for this inconsistency is that certified letters were sent to nonrespondents after 14 days had elapsed for cases in which the regular mail follow-up had failed to elicit a response in Procedure 1. In Procedure 2, the nonrespondent cases were sent to the Bureau of the Census for distribution to field enumerators. Therefore, more time elapsed between the first and second follow-up actions for Procedure 2, thus giving these informants more than 14 days to reply to the first mail follow-up.

Table 5—Informant Response Rates by the Procedures Used to Collect Data and the Action which Elicited the Response: Pennsylvania Mortality Study

Action Eliciting Response	Procedure 1		Procedure 2		Procedure 3	
	Per cent	Cumulative	Per cent	Cumulative	Per cent	Cumulative
		Per cent		Per cent		Per cent
Nonresponse	10		3		3	
Response	90		97		97	
Original mail query	40	40	45	45	44	44
Regular mail follow-up	28	68	38	83	*	*
Certified mail follow-up	22	90	*	*	45	89
Personal interview	*	*	14	97	8	97
Sample size:	480		483		473	

* Follow-up action was not attempted.

3. The final mail response rates were not significantly different for the procedure using one mail follow-up action by certified mail (Procedure 3) and for the procedure in which both regular and certified mail follow-up actions were included (Procedure 1).

Analysis of the Monthly Experiments

Experiment 2—Response rates for the two types of covering letters sent with the original mail query are presented in Table 6. The initial response rate for the Firm Covering Letter was 50 per cent compared with 32 per cent for the permissive version, a difference which is significant at the 1 per cent level. However, it is worth noting that with each successive follow-up action the difference between the rates became smaller so that the final mail response rates were virtually the same regardless of the type of covering letter sent with the original mail query.

Experiment 3—Response rates pertaining to the experiments with questionnaires of different lengths are presented in Table 7. The final mail response rates and the total response rates were not significantly different between the long and short forms. There was, however, a difference in the initial response rates. The short Smoking Query elicited a significantly higher initial response rate than the longer Regular

Query. On the other hand, the initial response rates to the Residence Query and the Regular Query were not significantly different. The short Smoking Query was substantially shorter than the short Residence Query. This fact was particularly evident if the decedent was a lifetime nonsmoker in which case check box replies to three simple questions supplied all the requested information about the decedent for the short Smoking Query.

Further Analysis of Response Rates for Informants

Analysis of response rates for selected characteristics of decedents and informants available from the death certificate demonstrates that there were no significant differences in the initial response rates except for one variable, color of decedent, which was significant at the 1 per cent level. There were significant differences in the final response rates for four variables: place of death, color, sex and age, and place of residence of decedent. The findings are summarized in Table 8.

Initial response rates were analyzed in terms of the quality of the completed mail form. The questionnaire was evaluated on the basis of the number of sections completed and the quality of the

information supplied, and was given a final rating of "first quality" or "second quality." The first quality forms were returned more rapidly than the second quality forms. Fifty-four per cent and 41 per cent, respectively, of the first quality and second quality forms were replies to the first mailing.

Institution Response Rates

For deaths occurring in a hospital or other medical-care institution, the name of the institution of death was identifiable from the death record itself. Other information needed for querying an institution, such as the name of the medical director or superintendent, and the street address, was obtained from one of several directories. In particular, the Directory of the American Hospital Association,⁴ the Modern Hospital Directory,⁵ the various state listings prepared under the Hill-Burton Act, and occasionally, the telephone directory were useful.

Two mailing actions were conducted with institutions. The first query to an institution was sent by regular mail. If a reply was not received within 14 days, a follow-up was sent by certified mail.

A total of 421 institutions identified

on the death certificate was queried in this study with results given in Table 9. These institutions can be distinguished on the basis of whether or not they are included in the Directory of the American Hospital Association. In general, hospitals are included in the directory, whereas other types of medical-care institutions such as nursing homes and sanitoriums are not. Although there is no difference between the two types of hospitals with respect to the initial response rate, the total response rate for institutions listed in the American Hospital Association Directory was 12 per cent higher than for the other institutions. The difference in the total response rate between the two types of institutions is significant at the 1 per cent level.

Conclusions concerning response rates from institutions in the Illness Study of Deceased Persons may be summed up as follows: (1) The total response rate for institutions identified on the death record was 98 per cent, (2) over 60 per cent of these institutions responded to the original mailing by returning queries within a 14-day period, and (3) the nonresponse rate is lower for AHA-listed than for unlisted institutions.

Table 6—Informant Response Rates by Type of Covering Letter and Action which Elicited the Response: Pennsylvania Mortality Study

Action Eliciting Response	Type of Covering Letter Sent With Original Mail Query			
	Firm		Permissive	
	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent
Nonresponse	6		5	
Response	94		95	
Original mail query	50	50	32	32
First mail follow-up	22	72	27	59
Second mail follow-up	17	89	28	87
Personal interview	5	94	8	95
Sample size:		329		329

Table 7—Informant Response Rates by Length of Questionnaire and Action which Elicited the Response: Pennsylvania Mortality Study

Action Eliciting Response	Type of Query and Length of Form					
	Regular Query (Long)		Smoking Query (Short)		Residence Query (Short)	
	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent
Nonresponse	6		5		8	
Response	94		95		92	
Original mail query	43	43	54	54	49	49
First mail follow-up	24	67	22	76	23	72
Second mail follow-up	22	89	10	86	16	88
Personal interview	5	94	9	95	4	92
Sample size:	637		180		256	

Summary and Conclusions

A summary of the response rates for each of the sources of information identified on the death certificate is presented in Table 10. These rates are based on surveys conducted by the National Office of Vital Statistics to collect supplementary information about deceased persons. The collection of data from each of the four sources began with a mail survey, and follow-up mail actions were conducted on nonrespondents. Finally, other data-collection procedures were used when indicated to obtain information from the hard core nonrespondents. The initial response rate refers to the proportion who replied to the original mail survey. The final mail response rate and the total response rate, respectively, refer to the cumulative response rates on completion of the follow-up mail actions and the follow-up procedures subsequent to the mailing actions.

The follow-up actions by mail and other procedures to collect information from each of the four sources have been developed on the basis of experimental studies. Thus, the final mail response rates for funeral directors and certifying physicians, given in Table

10, are based on two mail follow-up actions, a regular mail follow-up and then a certified mail follow-up. For family informants and institutions of death the final mail response rates are based on a single certified mail follow-up action. Experimentation and experience have indicated that for funeral directors and institutions of death there is no need for follow-up actions subsequent to mail surveys. On the other hand, telephone reminders with physicians and personal interviews with informants who have not responded to the follow-up mail survey may be indicated, depending on the reliability needed in the survey data.

The final response rates for each of the sources were uniformly high, 97 per cent or higher. Particularly important from the cost viewpoint are the high response rates at the conclusion of the mail surveys. The final mail response rate is about 89 per cent for informants and better than 95 per cent for each of the other three sources. The response rates to the original mail query are lowest for informants (about 44 per cent), highest for funeral directors (about 78 per cent), and are about 65 per cent for physicians and for institutions of death. Thus, from the re-

sponse rate viewpoint, the funeral director is the most economical of the four sources to query and the informant is the least economical. It should be noted, however, that one source is not a substitute for another because different types of information are collected from each of them.

The above remarks apply to nonre-

sponse rates only. Equally important in terms of conducting surveys are errors of response and sampling error. Some results from the studies pertaining to these matters have been reported.⁶ The fact remains, however, that response rates in these follow-back studies anchored to the death record are surprisingly high as compared to those usually

Table 8—Comparison of Response Rates for Selected Characteristics of Informants and Decedents: Pennsylvania Mortality Study

Characteristic of Informant or Decedent	Sample Size	Initial Response Rate		Total Response Rate	
		Response Rate	Difference Significant at 5% Level	Response Rate	Difference Significant at 5% Level
Informant					
1. Residence*					
Same address as decedent	845	44		95	
Different address	488	43	No	94	No
Address unknown	369				
2. Sex					
Male	659	44		95	
Female	993	45	No	94	No
Sex unknown	79				
Decedent					
3. Place of Death					
At home	606	42		96	
In institution	1,025	45	No	94	Yes
Other	100	43		83	
4. Color					
White	1,562	45	Yes	95	Yes
Nonwhite	169	29		84	
5. Sex and Age					
Male 20-65	551	43		92	
Male 65+	568	41		94	
Female 20-65	243	44	No	91	Yes
Female 65+	369	45		96	
6. Marital Status					
Married	998	43		93	
Never married	196	46		97	
Widowed and divorced	528	45	No	94	No
Marital status unknown	9				
7. Place of Residence					
250,000+	557	45		94	
50,000-250,000	222	47		95	
2,500-50,000	502	43	No	91	Yes
Rural	450	42		96	

* Excludes 29 cases where a query was not sent to the informant.

Table 9—Response Rates for Institutions Identified on the Death Certificate by Whether or not Listed in the American Hospital Association Directory and by the Action which Elicited the Response: Illness Study of Deceased Persons

Action Eliciting Response	Total		Institutions Listed in AHA Directory		Institutions Not Listed in AHA Directory	
	Cumulative		Cumulative		Cumulative	
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Nonresponse	2		1		12	
Response	98		99		88	
Original mail query	63	63	63	63	63	63
Certified mail follow-up	35	98	36	99	25	88
Sample size:	421		372		49	

Table 10—Response Rates for Selected Sources of Supplementary Mortality Data Based on Surveys Conducted by the National Office of Vital Statistics

Action Eliciting Response	Source from which Data Were Collected			
	Funeral Director	Physician	Informant	Institution of Death
	Per cent			
Initial response rate	78	65	44	64
Final mail response rate	99	96	89	97
Total response rate	99	98	97	97

obtained in surveys conducted principally by mailing procedures. The fact that the surveys were sponsored by a government agency probably increased the response rates since the public recognizes the interest of the government in matters related to vital events. It is likely, also, that respondents were sympathetic to the survey objectives which deal with health problems of the Nation. It is worth emphasizing, however, that the total response rates represent the cumulative effect of a concerted and persistent series of follow-up actions which had been developed by experimental methods.

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