

Mail Surveys

Guide to Estimating Duration and Personnel Needs by Task

Note: *This guidance is designed to ensure that GAO policies on evidence and generally accepted government auditing standards are met. The guidance conforms to the generally accepted principles and practices of the appropriate disciplines. Statements that particular actions “should” be taken are practices that are expected to be followed, unless there are good reasons for not doing so. Before deviating from a practice expressed as a “should” statement, staff members must consult with an appropriate staff member in Applied Research and Methods (ARM) or a team specialist and must document the consultation.*

This paper is a guide to planning a mail survey data collection project. It outlines the stages of the process, and, for each stage the tasks required to complete a mail survey. It also provides estimates of the minimum, average, and maximum times needed to complete each task in developing and conducting a mail survey. These time estimates are affected by a number of factors, which are described in this document.

In general, the more complex the task, the longer it may take to complete. The time estimates provided in this document show the number of elapsed working days that the task may take. For some tasks, mostly those that we have some control, the elapsed time span may be less than what is shown, depending on team resources and other considerations. For example, a task such as editing a mailing list may take less time if the list is divided up among multiple staff members. For tasks that we may have less control over, such as waiting for respondents to complete and return surveys by mail, we are limited in the extent to which we can speed up the process.

Many tasks can be done concurrently, which will shorten the overall timeframe for completing the project. Please contact an ARM/CDMA survey specialist or other design methodologist for more information.

Stage 1 – Questionnaire Development and Pretesting

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
1.1 Determine whether a survey (of any type) is the best way to obtain the necessary data.	1 < 2 > 3		Engagement staff and ARM/CDMA	
1.2 Develop researchable questions that will respond to the information requested by the requestor or mandated by the legislation.	1 < 10 > 21		Engagement staff and ARM/CDMA	
1.3 Determine whether mail survey is best data collection method.	1 < 2 > 3		Engagement staff and ARM/CDMA	

1.4 Operationalize the research questions into a draft questionnaire containing actual questions, response categories, etc. that can undergo pretesting.	1 < 7 > 21		Engagement staff and ARM/CDMA	
1.5 Pretest, modify, pretest, modify, etc. until all GAO parties agree that the questionnaire is ready for dissemination.	1 < 24 > 56		Engagement staff and ARM/CDMA	
1.6 Develop a detailed analysis plan.	1 < 14 > 21		Engagement staff and ARM/CDMA	

Stage 1 – Questionnaire Development and Pretesting – Factors that Affect Time Estimates

Issue	Response	Result
1.a How complex is the subject matter covered by the survey?	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Complexity ↑ Time ↑
1.b What is the level of subject matter expertise of GAO staff at start of engagement?	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Expertise ↑ Time ↓
1.c Is there prior research/questionnaires on topic?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↓ If no - time ↑
1.d What is the risk level of engagement?	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Risk ↑ Time ↑
1.e What is the level of non-survey workload required of assigned team staff?	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Other workload ↑ Time ↑
1.f What is the length of questionnaire (number of questions/pages)	<input type="checkbox"/> Long <input type="checkbox"/> Medium <input type="checkbox"/> Short	Length ↑ Time ↑
1.g How many pretests/questionnaire revisions will be needed to reach closure?	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	# of pretests ↑ Time ↑
1.h What is the number of distinct survey strata who may, for example, use different terminology thus requiring pretests are multiple physical/geographic locations?	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	# of strata ↑ Time ↑
1.i Other factors?		

Stage 2 – Determination of Survey Population/Sample

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
2.1 Determine the size and characteristics of the survey population.	1 < 21 > 35		Engagement staff and ARM/CDMA	
2.2 Obtain a listing of the survey population.	1 < 21 > 35		Engagement staff	
2.3 Decide on whether the entire survey population should be surveyed or whether a sample is appropriate.	1 < 3 > 5		Engagement staff and ARM/CDMA	

Stage 2 – Determination of Survey Population/Sample – Factors that Affect Time Estimates

Issue	Response	Result
2.a What is the size of the population/sample?	<input type="checkbox"/> Large <input type="checkbox"/> Medium <input type="checkbox"/> Small	Size ↑ Time ↑
2.b Does a listing of population exist in one place (e.g., single database)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↓ If no - time ↑
2.c Does the listing of the population include a mailing address?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↓ If no - time ↑
2.d Is the listing of addresses in paper or electronic format?	<input type="checkbox"/> Electronic <input type="checkbox"/> paper	If electronic ↓ If paper - time ↑
2.e Is a separate screener survey necessary to identify those eligible for main survey?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
2.f Does the listing have to be supplemented with auxiliary information to measure nonresponse bias (if nonresponse is expected to be high)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
2.g Other factors?		

Stage 3 – Sampling (If no sample required, Skip to Stage 4)

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
3.1 Determine the level of generalizability required (i.e., the number of strata that needs to be separately reported on).	1 < 3 > 5		Engagement staff and ARM/CDMA	
3.2 Select the sample	1 < 7 > 14		Engagement staff and ARM/CDMA	

Stage 3 – Sampling – Factors that Affect Time Estimates

Issue	Response	Result
3.a Will the sample be stratified?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
3.b How many strata will be required?	<input type="checkbox"/> Many <input type="checkbox"/> Few	Number of strata ↑ Time ↑
3.c Does the population listing from which the sample is to be selected from exist in electronic or paper format?	<input type="checkbox"/> Electronic <input type="checkbox"/> paper	If electronic - time ↓ If paper - time ↑
3.d Is it likely that the population listing has ineligible elements that will be discovered upon sampling, resulting in an adjustment to the sample design?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
3.e Other factors?		

Stage 4 – Mailing Preparation and Follow-up

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
4.1 Obtain mailing list of survey respondents.	1 < 14 > 28		Engagement staff	
4.2 Edit mailing list (i.e., ensure that addresses are complete and are properly formatted).	1 < 4 > 14		Engagement staff	
4.3 Produce all materials needed for survey mailout (e.g., questionnaires, cover letters, envelopes, postcards, labels, etc.)	1 < 7 > 14		ARM/CDMA and Shared Services	
4.4 Assemble initial mailout materials and mail survey.	1 < 2 > 3		ARM/CDMA and Shared Services	
4.5 Prepare for follow-up mailings.	1 < 2 > 4		Engagement staff and ARM/CDMA	
4.6 (If necessary) Use additional follow-up methods (telephone follow-up calls, telephone interviews of a sample of nonrespondents covering key survey questions, etc.)	2 < 3 > 7		ARM/CDMA and contractor staff	

Stage 4 – Mailing Preparation and Follow-up – Factors that Affect Time Estimates

Issue	Response	Result
4.a Does the mailing list exist in one place rather than having to be compiled from various sources?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↓ If no - time ↑
4.b Is the mailing list complete, up-to-date, and does it require minimal editing?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↓ If no - time ↑
4.c Is the mailing list in electronic or paper format?	<input type="checkbox"/> Electronic <input type="checkbox"/> paper	If electronic - time ↓ If paper - time ↑
4.d Is a pre-mailing or other advance contact planned (e.g., notification letter or advance call made prior to the initial survey mailout)? ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
4.e Will more than a single follow-up mailing be necessary to reach an acceptable response rate? ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
4.f Will a telephone follow-up be necessary to reach an acceptable response rate?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓

¹ While this may add time early in the survey process, it often increases the initial response rate, thus reducing time spent on follow-up efforts.

² Factors affecting response rate include: sensitivity of topics covered, level of salience of survey topic to the respondent, respondent type (e.g., physicians, attorneys, etc.), literacy level of the respondent, etc.

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Stage 4 – Mailing Preparation and Follow-up – Factors that Affect Time Estimates
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<p>4.g Is there any kind of seasonal issue with respondent availability or level of respondent burden that may increase response time?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>If yes - time ↑ If no - time ↓</p>
<p>4.h Does the response process for each sampled case involve: a) multiple informants, b) directing the survey request to respondents other than the one initially receiving the questionnaire, or c) high level of review and approval before responses are submitted?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>If yes - time ↑ If no - time ↓</p>
<p>4.g Other factors?</p>		

Stage 5 – Survey Editing and Data Entry

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
5.1 Edit returned questionnaires for completion, consistency of responses, skip pattern errors, etc.	Done as surveys are returned, prior to being sent to data entry. Will add time depending on number of surveys and problems encountered.		Engagement staff guided and possibly assisted by ARM/CDMA	
5.2 (If necessary/feasible) Contact respondents to clarify responses or obtain additional information.	Will add time depending on number of calls necessary, ability to contact the respondent, etc.		Engagement staff	
5.3 Data entry and 10% verification	Data entry is done in batches as surveys are returned. Verification is done for each batch. Time 1-5 days per batch and 1-2 days for verification.		Data entry done by contractor. ARM/CDMA does the verification.	

Stage 5 – Survey Editing and Data Entry – Factors that Affect Time Estimates

Issue	Response	Result
5.a How many questions are included in the questionnaire?	<input type="checkbox"/> Many (over 50) <input type="checkbox"/> Moderate (25-50) <input type="checkbox"/> Few (Under 25)	If many - time ↑ If few - time ↓
5.b How complex is the question format (e.g., many skips, multi-part matrices, complex instructions, etc.)?	<input type="checkbox"/> Complex <input type="checkbox"/> Moderate <input type="checkbox"/> Simple	If complex - time ↑ If simple - time ↓
5.c Does the questionnaire contain numeric entry type questions (e.g., dollar amounts, percents, etc.) that require review and editing?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
5.d Does the questionnaire contain open-ended items that will require coding prior to data entry?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
5.e Is item nonresponse requiring follow-up or complexity of questions resulting in response errors likely to be an issue?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
5.f Other factors?		

Stage 6 – Analysis

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
6.1 Write computer analysis program for analysis of survey data	1 < 7 > 14		ARM/CDMA Data Analyst	
6.2 (If sample used) Sampling weights calculated and applied	1 < 2 > 5		ARM/CDMA Statistician	
6.3 Appropriate descriptive and statistical procedures run and reviewed (Preliminary runs done as data returned from data entry. Final runs done when all data are available)	2 < 7 > 14		ARM/CDMA Data Analyst	
6.4 Nonresponse bias assessment and adjustment	2 < 7 > 14		ARM/CDMA Data Analyst	
6.5 (If necessary) Conduct data reliability assessment (May be necessary if quantitative data are being collected by the survey)	2 < 7 > 14		Engagement staff and ARM/CDMA	

Stage 6 – Analysis – Factors that Affect Time Estimates

Issue	Response	Result
6.a How many questions are included in the questionnaire?	<input type="checkbox"/> Many (over 50) <input type="checkbox"/> Moderate (25-50) <input type="checkbox"/> Few (Under 25)	If many - time ↑ If few - time ↓
6.b How complex is the sample?	<input type="checkbox"/> Simple random <input type="checkbox"/> Stratified sample	If simple random - time ↓ If stratified – time ↑
6.c What types of analyses are planned?	<input type="checkbox"/> Basic (e.g., frequencies) <input type="checkbox"/> Moderate (e.g., cross-tabs, correlations, etc.) <input type="checkbox"/> Complex (e.g., multiple regression, etc.)	If basic – time ↓ If complex – time ↑
6.d Is nonresponse likely to be high and a nonresponse bias analysis planned?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
6.e. Is a data reliability assessment planned?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
6.f Other factors?		

Stage 7 – Report Preparation

Tasks	Duration (in days) <i>Low < Medium > High</i>		Personnel Needs	
	Working estimates	Team estimates	Required staff	Assigned staff
7.1 Survey-based report text written and reviewed	1 < 14 > 28		Engagement staff and ARM/CDMA	
7.2 (If used) Survey-based graphics/tables developed	1 < 7 > 14		Engagement staff and graphics specialists	
7.3 (If used) Develop E-supplement (For information on e-Supplements, see “Guidance for Producing E-Supplements” in the EAGLE)	7 < 14 > 21		Engagement staff and ARM staff	
7.4 Prepare OS&M and technical appendices (if used)	1 < 7 > 14		Engagement staff and ARM/CDMA	

Stage 7 – Report Preparation – Factors that Affect Time Estimates

Issue	Response	Result
7.a What type of report is this? (e.g., Chapter/Letter/Briefing/Testimony)	<input type="checkbox"/> Chapter report <input type="checkbox"/> Letter report <input type="checkbox"/> Briefing <input type="checkbox"/> Testimony	If chapter report – time ↑
7.b Will the report contain numerous or complex graphics depicting the survey results?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
7.c Will there be an e-supplement?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
7.d Will the report contain technical appendices?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
7.e Will the report contain confidence intervals or other sampling error disclosures for some or all estimates?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes - time ↑ If no - time ↓
7.f Other factors?		