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Abt Associates Inc. 55 Wheeler Street Cambridge, MA 02138 Guidebook for Conducting Resident Satisfaction Surveys in Public Housing

CHA Resident Satisfaction and Management Needs Survey

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Chapter 1 Introduction

1.0 Purpose of the Guidebook

The purpose of this guidebook is to provide public housing authority (PHA) staff with strategies for conducting useful, high-quality surveys of their residents. The guidebook presents basic information on how to design and implement resident surveys and how to present the results to different audiences.

A survey that is well-designed and well-implemented can be a powerful management tool—it can help PHAs measure and improve their own performance, as well as identify and address residents' needs. PHA staff may be fearful that a resident survey will only be a vehicle for complaints, but a good survey can highlight successes—for example, a survey of Chicago Housing Authority residents showed a dramatic improvement in residents' satisfaction with maintenance in response to a new focus on work-order completion. Survey results can also prove invaluable to a PHA's planning or reorganization process, as the PHA seeks to improve both its management and customer service.

Surveys can inform PHAs about:

- **⇔** How well they are serving their residents;
- **⇔** What management improvements are needed;
- ⇒ What its residents' needs and concerns are; and
- **⇔** How well new programs or initiatives are working, and whether they have been effective.

The Department of Housing and Urban Development (HUD) is encouraging PHAs to use resident satisfaction surveys as a means of monitoring their management performance and becoming more responsive to resident needs. For example, the recent changes in the welfare system may have profound effects on many PHA residents. A well-conducted survey can help a PHA determine the proportion of residents who are employed, in training programs, facing time limits on benefits, and/or needing additional services to achieve self-sufficiency. This information may be critical to a PHA, since it will likely affect its federal funding amount, rent roll, and ultimately every aspect of its management.

This manual is based on Abt Associates' experiences—working with the Survey Research Laboratory at the Univeristy of Illinois at Chicago—in conducting resident satisfaction surveys of Chicago Housing Authority (CHA) residents for HUD. The CHA is one of the most challenging public housing environments in the United States for conducting surveys. Most of its developments are large and dangerous. In addition, the CHA has a variety of housing types, including high-rise buildings, walk-ups, and rowhouses. Even so, the information provided here is relevant for any PHA; while some of the issues discussed here (e.g., survey samples) may not apply to smaller PHAs, information such as how to administer surveys, write a good questionnaire, and present the information to a variety of audiences will provide all PHAs seeking to conduct a resident satisfaction survey a good working knowledge of how to do so.

Despite these challenges, the in-person surveys in CHA housing were successful, with response rates well over 75 percent and information collected about resident satisfaction and management needs *that has been useful for both the CHA and HUD*. The purpose of the CHA Resident Satisfaction and Management Needs Survey was to assess residents' perceptions of the impact of the HUD takeover of the CHA in 1995. The survey (presented in Appendix A) included questions on residents' satisfaction with maintenance, perceptions of problems with crime, perceptions of security services, use of social services, and employment status. The survey was conducted over two years, consisting of two rounds of interviews (the first in the winter of 1996 and the second in the winter of 1997) with approximately 1,200 residents. The sample for the survey was split into three groups: residents of CHA's family high-rises, family low-rises, and senior developments.

The CHA resident satisfaction survey experience shows it is possible to conduct effective—and helpful—surveys of PHA residents even under the most challenging conditions. The CHA surveys were successful because staff used techniques that would ensure high-quality information, as shown below.

For a successful survey:

- ⇔ Choose an appropriate survey method;
- **⇒** Design a relatively short and simple survey;
- **⇒** Administer the survey carefully; and
- **⇔** Present the results in a format that can be easily used by management staff.

1.1 Why PHAs Should Survey Their Residents

This guidebook can help PHAs conduct surveys for a variety of purposes, but the focus is on resident satisfaction surveys. For PHAs, conducting a customer satisfaction survey means determining the level of customer service they deliver to their residents and working to improve this service over time. Resident satisfaction surveys can help PHAs both sort out where to begin this process—the first survey will give the PHA "baseline" information—and provide an opportunity to track their customer service progress over time.

If a PHA opts to conduct a resident satisfaction survey, staff should be prepared to act on the results. A survey may uncover problems that were not readily apparent, and may be larger and more complex than staff imagined. On the other hand, a survey may show that the PHA's management initiatives are doing well; in this case, the results might suggest ways in which the PHA could reallocate resources to address whatever issues remain.

Whether the survey indicates problems or successes—or a mix of both—staff should carefully review results, share them with management and residents as appropriate, and if necessary, take action to address any potentially serious issues. Residents may feel frustrated if nothing seems to change as a result of the survey; even relatively modest improvements may make them feel that their concerns were heard.

1.2 What is an Effective Survey?

In order for a survey to be effective, it needs to be properly designed and implemented. A good survey is easy to understand and complete, and seeks to gather systematic information about residents' views. An improperly designed and administered survey will result in biased and, consequently, inaccurate and unhelpful information.

Biased information can result from a survey that was written with a pre-determined outcome in mind; that is, the questions were written in such a way that respondents are steered to particular answers. Such questions are not always deliberately biased; survey experts themselves must carefully examine their surveys to eliminate any unintentional bias that may creep in. Biased information can also result from administering a survey only to select groups of people, such as Resident Council members who tend to be more outspoken or have different perspectives than other residents.

Finally, interviewers can create bias; they may make mistakes in administering the survey, reading the questions incorrectly, or even steering respondents to particular answers by gestures or changes in their tone of voice. Further, residents' answers may be affected by the interviewers' characteristics; for example, residents may be hesitant about expressing their personal opinions to PHA staff or residents of their own building. To avoid these problems,

PHAs may want to hire an outside group (such as a university or consulting/research firm) to develop and administer their resident satisfaction surveys.

This guidebook is meant to serve as a resource for PHAs seeking to conduct surveys of their residents for management purposes. Chapter 2 provides an overview of the types of surveys PHAs might want to use, including self-administered surveys, telephone surveys, and inperson interviews, and reviews the advantages and disadvantages of each. Chapter 3 discusses the issue of survey design, including making surveys simple and easy to use, testing the questionnaire, and handling sensitive topics. In Chapter 4, methods for selecting a sample of residents to survey are discussed. Chapter 5 presents a detailed discussion of survey administration including: contracting out versus conducting the survey in-house; recruiting and hiring interviewers (including using residents as interviewers); training interviewers; and conducting the survey. Finally, Chapter 6 discusses techniques for analyzing and presenting the survey results. In each chapter, there are examples from the CHA Resident Satisfaction and Management Needs Survey that show how to use these techniques in practice.

Chapter 2 Types of Surveys

2.0 Introduction

Once your PHA has decided to conduct a resident satisfaction survey, your staff will need to consider what type of survey is most appropriate to achieve your desired goals. This chapter provides an overview of three types of surveys:

- self-administered (written);
- telephone; and
- face-to-face surveys.

The pros and cons of each method are described, with particular attention to their advantages and disadvantages in the public housing context. Finally, the cost implications of the different survey methods are discussed.

Each section presents several questions to consider when deciding which method is best for your situation.

To plan your survey, consider:

- **⇔** Its timing (i.e., time of year);
- The amount of time you have to conduct it;
- ⇒ Financial and staffing resources available to complete the work;
- **□** Topics you want to cover; and
- **⇒** Its length.

There is no one right or wrong way to do a survey—the decision about what type of survey method to use is highly dependent on a combination of factors.

2.1 Self-Administered Surveys

Self-administered surveys are written questionnaires that are completed with no interviewer present. The public housing resident is given a form, reads the questions him/herself, and marks his/her responses. Mail surveys—where residents are sent questionnaires and expected to mail them back—are one common type of self-administered survey. PHAs may also use a variety of other approaches, such as asking residents to complete a survey at a central location (e.g., the site manager's office, when a resident turns in his/her rent check or submits a work order).

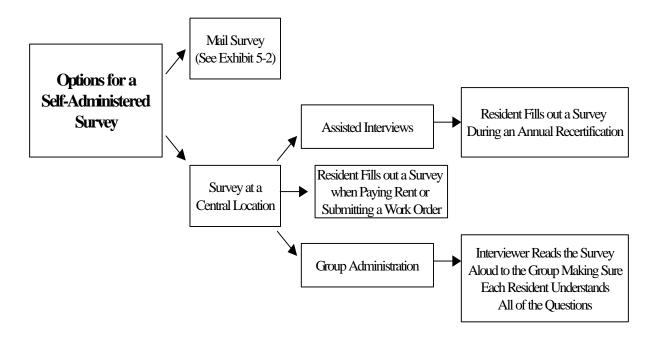


Exhibit 2-1
Conducting a Self-Administered Survey

Because self-administered surveys do not require interviewers, they have several logistical advantages over face-to-face or telephone surveys:

- Self-administered surveys are easier to administer, and therefore are less costly. The main advantage is that self-administered surveys eliminate the need for hiring and supervising interviewers (and paying the related travel costs) and are therefore generally the least expensive type of survey.
- Some self-administered surveys can be administered very quickly. The length of time it takes to collect a self-administered survey will vary depending on how you choose to administer it. If you choose to invite residents to a central location to complete the survey, you can have all of your responses within a few days, depending on how much time is allowed for following up with people who do not respond.

Although the cost-effectiveness of self-administered surveys makes them very appealing, there are also many drawbacks, several of which are particularly important in the public housing context:

- Many public housing residents have low literacy levels. Self-administered surveys rely on the residents' abilities to read and comprehend written questions. Given the relatively low literacy level of many public housing residents, asking them to participate in a self-administered resident satisfaction survey may be unrealistic. Residents may not understand the questions, which will generate poor quality information. Further, you may end up with a situation where the only people who complete the survey are those who read well, which will mean that you cannot generalize the results to your entire resident population.
- Self-administered surveys must be kept short. Self-administered surveys need to be very short, or residents will not finish filling them out. Lengthy surveys can appear intimidating on paper, and that may affect cooperation, particularly when many residents may have difficulty reading. Further, the survey has to be simple and should not include any complex or multi-part questions. As a result, the range of issues you can address in your resident satisfaction survey will be limited. One way to address this problem might be to use slightly different questionnaires for different groups of residents; however, this strategy will make analyzing your data more complicated.
- You have less control over who completes the survey. With self-administered surveys, you must rely on the residents to return their completed questionnaires. If certain groups of residents are more likely to fill out their survey than others, your results will not be generalizable to the entire resident population. One way to address this problem is to ask residents to complete the surveys at a central location; you could invite residents to a common area where food and refreshments are provided in exchange for completing the survey. Another approach would be to ask residents to complete a survey as they conduct routine tasks such as paying rent or processing a maintenance request. However, both of these strategies run the risk of making your survey sample less representative of the entire population of residents (i.e., only those residents who show up and fill out the questionnaire will be included). To have a truly representative sample, you need to keep strict control over the sample, including knowing who was invited to participate, who actually did participate, and following up with people who did not complete a questionnaire.
- Relying on the mail can cause problems. If you opt to mail out your resident satisfaction survey, problems could occur as a result of poor mail delivery to public housing households (a problem encountered in Chicago). One way to address this problem is to hire someone to distribute the surveys in person (i.e., to walk to each selected apartment and personally hand the survey to each resident or

- slip it under his/her doorway). This option may increase the costs of administering the survey, but these expenses may be offset by the savings in postage costs.
- It is difficult to ensure that questionnaires are filled out correctly. With self-administered surveys, you have little control over how many surveys are completed by any one resident. Unless the PHA is able to maintain strict control over the survey, it would be easy for a group with an agenda to "stuff the ballot box" with questionnaires that reflected their views.
- Response rates are generally low. Unfortunately, the proportion of people who actually respond to self-administered surveys is generally quite low. A very high response rate for a mail survey is 30 percent. As noted above, the proportion of residents who turn out for a group event is also likely to be low. In contrast, telephone and in-person surveys usually have response rates of at least 70 percent because of follow-up. Sending out a larger number of surveys will not address this problem; while you may have a larger number of questionnaires to analyze, they will still only represent a small proportion of your resident population.

Exhibit 2-2
Weighing the Benefits of a Self-Administered Survey

Pros	Cons
✓ Easy to administer	X Low literacy levels of residents
✓ Quick to administer	✗ Must be kept short
✓ Less costly	✗ Not much control over who completes it
	X Problems with relying on the mail
	✗ Difficult to ensure it is filled out correctly
	✗ Low response rates

2.1.1 Group Administration

Researchers sometimes use what is called "group administration" to try to overcome some of the disadvantages of self-administered surveys, while still taking advantage of the cost savings. This approach involves inviting residents to a central location, as described above. However, instead of having residents pick up a survey and complete it independently, they stay at the location to fill out the survey as an interviewer reads it aloud to the entire group to help

ensure that they all understand the questions.¹ Another approach might be to have several interviewers available to help residents who appear to be having trouble filling out the questionnaire. It is important to note that while this approach helps to address the problem of low literacy levels and poor comprehension, it does not eliminate them; some residents may be reluctant to ask for help or may still have trouble following along with the group. Further, unless the PHA is able to maintain strict control over who participates, and follows up with those who do not attend, you will still have the problem of your survey sample reflecting the views only of those residents who are willing to come to a meeting to participate in a survey.

2.1.2 Assisted Interviews

Another approach that agencies sometimes use is to have their residents complete the survey as part of an application or recertification process. PHA staff could hand a survey to a resident to complete, and then review it to make sure it was filled out completely. The advantages of this approach are that all residents are required to complete the survey and the staff member could help if the resident had problems with literacy or comprehension.

However, a major disadvantage concerns honesty—residents would be aware that the staff person was reading their answers, which might affect how they answer the questions. This problem is called *interviewer bias*. In addition, this approach means that the surveys would be administered over a long period of time, requiring an extended data collection period.

2.2 Telephone Surveys

Both telephone and in-person surveys are generally more complex and costly to administer than self-administered surveys, but offer the significant advantage of generating higher-quality results. Both strategies offer greater assurance that residents will understand the questions. Further, since response rates are usually higher, your survey sample will be much more representative of your resident population.

Telephone surveys are interviewer-administered, one-on-one interactions between interviewers and interviewees. In professional survey organizations, the interviews are usually conducted from a central telephone center with multiple telephone stations and monitoring capabilities.

Telephone surveys are usually simpler to administer than in-person surveys and more reliable than self-administered surveys. According to Paul Lavrakas (1993), an expert in survey research methods, telephone surveys offer the following advantages:

See Appendix B for an example of a self-administered survey where the group administration method was used.

- It is easier to control the quality of the interviews. In both in-person and telephone surveys, you have a considerable amount of control over who you choose to interview (the sampling design) and how the questions are asked. With telephone surveys, however, it is easier to monitor the interviewing staff.
- Telephone surveys are generally more cost-effective than in-person interviews.

 In most cases, telephone surveys are less costly than face-to-face interviews. First, there are no travel costs associated with telephone interviews, and second, it has been demonstrated that interviewers spend less time administering a telephone interview than an in-person interview.
- *Data can often be collected quickly*. With telephone surveys, data can be gathered more quickly than for many in-person surveys.

In spite of the logistical and financial advantages telephone surveying can offer, there are some significant disadvantages as well, particularly in the public housing context:

- Questionnaires have to be kept short. While they can be longer than a self-administered survey, telephone surveys still must be short and relatively simple. Interviewees, particularly seniors, usually find it more tiresome to stay on the phone to complete a long survey than to participate in an in-person interview. Again, one strategy is to use slightly different questionnaires for different members of the sample (to cover more questions overall); however, this approach will mean you have a smaller sample for each question.
- *Telephone surveys miss a substantial portion of the population*. Telephone surveys introduce what Lavrakas (1993) calls "coverage error," which means that not all households in the population (in this case, the public housing development) are included in the survey. Only those households with telephones can be contacted. This problem is particularly important in the public housing context; by administering a survey by telephone, you risk eliminating upwards of 30 to 50 percent of your population. Those individuals without phones may differ from the rest of your population in important ways (e.g., they may be more likely to be unemployed).
- Telephone surveys face competition with other telephone surveys and solicitors. Another problem confronting telephone data collection is the rise of telemarketing. Survey research organizations are struggling with decreasing response rates as more and more people are contacted by telemarketers and react more negatively to telephone surveys as a result. This may not be a big problem for PHAs, since tenants presumably have at least some incentive to cooperate with the survey.
- Interviewers can affect how people answer the questions. Finally, both telephone and in-person surveys introduce what are called "interviewer biases." In the case of telephone surveys, residents' perceptions of who they think they are talking to may influence how they answer the questions. For example, African-American respondents may answer questions about race or attitudes about police

differently if they think they are talking to a black interviewer rather than a white one. Public housing residents answering a survey may be particularly concerned if the interviewers are PHA staff or other residents, because they may fear that their answers will affect their housing assistance.

Exhibit 2-3
Weighing the Benefits of a Telephone Survey

Pros	Cons
✓ Easy to control interview quality	X Must be kept short
✓ More cost effective than in- person interviews	✗ Misses a substantial portion of the population
✓ Quick data collection	✗ Competes with other telephone surveys and solicitors
	✗ May affect how people answer the questions

2.3 Face-to-Face Surveys

While face-to-face surveys can be more complex to administer, this method can be very effective in public housing. Face-to-face surveys (also known as in-person interviews) are interviews conducted on-site by a trained interviewer asking questions in person to selected respondents. In-person interviews offer many of the same advantages as telephone surveys in terms of confidence in the quality of the data and ability to ask complex questions. The interviewer uses a standardized survey instrument, reads the resident each question exactly as it is written, and records the answer within the framework of the answer categories provided in the survey.²

Although for financial reasons most housing authorities will opt to conduct paper-and-pencil interviews (PAPI), many survey organizations are moving to computer-assisted personal interviewing (CAPI) methods for in-person data collection. In CAPI interviews, the questionnaire is programmed for use on a laptop computer in such a way that out-of-range responses cannot be entered by the interviewer, and the questionnaire follows programmed skip patterns. The data are therefore entered at the time of interviewing, and this eliminates errors related to data entry. In addition, many researchers are experimenting with adaptations of CAPI interviews such as audio-CASI (audio, computer-administered, self-interviews) in which a respondent listens to the interview on headphones and enters his/her responses into the laptop him/herself as each question is asked. Audio-CASI provides more anonymity to the respondents when answering sensitive questions. If the technology were available, a PHA might be able to use this approach to administer a survey to residents at

In general, in-person interviews offer some important advantages:

- It is easier to establish rapport with residents and assure them that the survey is legitimate. Unlike a telephone interview, an in-person interviewer has a better opportunity to establish rapport with the resident. In addition, the interviewer can display documentation such as an official letter authorizing the study or an employee identification badge that may help convince the resident that the survey is legitimate. Establishing legitimacy may be particularly important in public housing settings where residents are often suspicious and fearful—or feel they have been over-studied by outside researchers.
- Interviewees are more likely to complete an in-person survey. Residents are more likely to refuse an interview immediately than they are to break off an interview in the middle. Because it is easier to establish good rapport in-person, it is also easier to get residents to cooperate with longer surveys. Residents are generally more willing to conduct longer interviews in-person than on the phone—it may be more difficult for an interviewee to end an interview that has begun when the interviewer and the resident are face-to-face.
- Residents are generally more comfortable answering difficult questions. Finally, there is some indication that face-to-face interviews may be better a better choice if there are any sensitive topics to discuss (e.g., domestic violence, substance abuse, welfare use).³ In-person interviewers are more aware of how the interviewee is reacting to the questions and can respond accordingly.

Face-to-face interviews offer particular advantages for conducting resident satisfaction surveys in public housing:

• Residents' literacy levels are less important. As discussed above, many public housing residents have difficulty reading. Because in-person interviews are interviewer-administered, the literacy level of the resident becomes much less of a concern. It is still important to be aware of the comprehension level of the questionnaire (see Chapter 3), but residents may be better able to understand spoken words. In addition, the interviewers should be trained to pay attention to the interviewee's comprehension. If a resident does not understand a question, the

recertification time.

There is considerable research comparing the quality of data collected for sensitive questions based on the methodology used. It could be argued that because face-to-face interviews are less anonymous, they may introduce biases in the data.

- interviewer should be instructed to repeat it and provide definitions or clarification as necessary.⁴
- You are able to reach a larger proportion of the population. In-person surveys allow you to reach residents who do not have telephones. This is an important issue for surveying public housing residents, since many do not have telephones, and temporarily-disconnected telephone lines are a common problem.

Although there are a number of advantages to conducting in-person interviews in public housing, there are also some important disadvantages.

- The logistics of coordinating data collection on-site can be challenging (see Chapter 5). Issues to consider include: identifying, recruiting, and training a large number of interviewers who are willing and able to work on-site (if your developments are high-crime, this may be a particular problem); supervising the staff, monitoring data collection, and maintaining quality control standards; and maximizing interviewer safety.
- Interviewers can affect how people answer the questions even more than in a telephone survey. Like telephone surveys, in-person interviews introduce interviewer biases. Because the resident can see the interviewer, his/her characteristics such as race, gender, perceived age, and/or socio-economic status may influence their answers. Further, using PHA staff or even other residents as interviewers may also affect interviewees' answers; they may fear that the survey is not truly anonymous or that it will affect their housing assistance in some way.

Exhibit 2-3
Weighing the Benefits of a Face-to-Face Survey

Pros	Cons
✓ Easy to establish rapport with respondents	X Coordination of data collection can be challenging
✓ Interviewees more likely to complete it	X Interview bias more likely than in other survey types
✓ Respondents more comfortable answering difficult questions	X More costly than other survey types

In order to maximize standardization across interviews, interviewers are often provided with responses to commonly-asked questions or definitions to words that may be unfamiliar to the respondent. The interviewers are instructed to read these phrases as written whenever requested by a respondent, but they may not be read in every case.

- ✓ Literacy levels less important
- ✓ Likely to reach a larger portion of the population
- ✓ May be more cost-effective than other survey types

2.3.1 Cost Effectiveness of Face-to-Face Interviews

Typically, face-to-face interviews are the most expensive of the three types of survey methods. However, for doing a resident satisfaction survey in the public housing context, this method may actually be quite cost-effective.

- *Interviewer travel costs are low.* Particularly in large housing authorities, large numbers of residents live within a small, densely-populated geographic area. This concentration means that interviewer travel costs are low both to and from the site each day and between interviews.
- It is easy to do a large number of interviews quickly. Since residents live close to each other, productivity is high. If one resident is unavailable, the interviewer can go down the hall to another selected apartment and complete an interview.
- Residents are often able to help interviewers locate their neighbors. Many public housing residents have frequent contact with their neighbors, which means they are often able to provide interviewers with information about the whereabouts of other selected respondents and assist with locating them.
- Public housing residents are relatively easy to contact, resulting in quick data collection. Since a significant percentage of public housing residents are not employed in nine-to-five jobs, the population is more accessible than in most communities. In the CHA resident satisfaction survey, the team was able to complete a large in-person survey in a very short period of time—over 500 interviews within three weeks.

2.4 Choosing a Survey Method

The information provided above is designed to allow you to make informed decisions regarding the costs and benefits of selecting a survey method for your PHA's resident satisfaction survey. No method is perfect, and each involves some major trade-offs. You need to determine which issues are most important for your situation and choose the method that has the least disadvantages. Although there are no hard and fast rules for deciding which method to use, you should consider the following questions when making your decision:

- How much time do I have to complete the data collection? In order to design, test, and administer a survey, you need to follow a number of sequential steps. For example, assuming you follow the recommended procedures for a mail survey (i.e., multiple mailings with a reminder postcard),⁵ data collection can take eight to ten weeks from the time the first survey is mailed out to the time when the data is complete and available for analysis. Telephone surveys can be administered more quickly, but depending on the length of the survey, the number of interviewers or telephone stations available, and the accessibility of the residents, a telephone survey can take several weeks to complete. If you have enough resources to hire a large enough interviewing staff, a face-to-face survey or group administration may be your fastest options in public housing.
- ➡ What time of year will data collection occur? The need for survey results often dictates the schedule of a project. For instance, if information is needed to help guide modernization planning that is being proposed in the summer, data collection would need to occur during the winter. In some more dangerous public housing developments, conducting in-person surveys in the summer may create safety concerns because the weather is warmer (when statistically, crime is higher) and school is not in session. Telephone and self-administered surveys do not pose the same constraints.
- More than any other factor, the availability of resources will dictate the type of survey that you choose. As a general rule, the cost per case increases as you move from self-administered to telephone to face-to-face surveys. However, you should explore ways you might be able to reduce costs (while keeping in mind any biases that might be introduced as a result) that are unique to your situation. For instance, if you can recruit and train existing staff as interviewers, you may be able to reduce interviewer costs. However, you need to consider the confidentiality of the interviews as well as the impact on the residents' willingness to truthfully provide information to a PHA staff person.
- How sensitive are the questions being asked in the questionnaire? The survey topic is also an important consideration when deciding on a survey method. If you are collecting factual information such as information about maintenance or requests for repairs, collecting the information in a self-administered survey may be the best option. However, if you are gathering sensitive information about issues such as barriers to employment, crime victimization, or domestic violence, it is more appropriate to have personal interaction with the person you are interviewing.
- → *How long is the survey?* A complex questionnaire or one addressing sensitive issues is likely to be longer than a simple questionnaire about maintenance

⁵ See Chapter 6 for a brief overview of administering a mail survey. For a thorough discussion, see Dillman, D.A. 1978. *Mail and Telephone Surveys: The Total Design Method*. New York: Wiley.

problems. As a rule of thumb, the more interaction the residents have with the interviewer, the more time they will be willing to spend answering questions (i.e., you can generally ask the most questions in face-to-face surveys and the least in self-administered surveys).

2.5 CHA Resident Satisfaction and Management Needs Survey

This section describes the decision-process used in selecting a survey method for the CHA Resident Satisfaction and Management Needs Survey. This experience may help guide you in your thinking about the pros and cons of the three different options for your own PHAs' resident satisfaction survey.

For the CHA survey, all three types of surveys were initially considered. After weighing the pros and cons of each, the survey team chose to administer a face-to-face survey.

The decision to administer a face-to-face survey was a result of concerns that choosing either of the other survey methods would mean sacrificing both representativeness and data quality. In order to conduct a telephone survey, the CHA would have had to provide a list of leaseholders and corresponding telephone numbers. The only alternative would have been to use random digit-dialing procedures to identify households located within the targeted geographic area. Neither option seemed realistic. The CHA did not track resident phone numbers on a regular basis. Further, even if the agency could have provided a list, this method would have missed a significant proportion of the households because many did not have a telephone or their telephones would be temporarily disconnected. Given the seriousness of these problems, the team ruled out telephone surveys as a viable option.

There were several reasons for ruling out self-administered surveys. First, the team had concerns about the low literacy level of the population and felt that residents would simply not be able to complete the survey. Second, there was no suitable way to deliver the survey to the selected respondents. Mail delivery in CHA housing is unreliable—there would be no guarantee that the residents would actually receive their survey in the mail. Hiring staff to distribute the survey would be costly, and without intensive supervision, there was no way to guarantee that staff would actually deliver the surveys, especially in dangerous buildings.

A group or assisted administration was also unrealistic. CHA developments are very large; therefore, it was unlikely that inviting residents to a central location would result in a representative sample. Further, because the information in the survey was time-sensitive (asking about changes during a specific time period), having residents fill out the survey at a management office over a period of several months was also not an option.

Finally, the team felt that selecting a face-to-face survey method would increase respondent cooperation. As mentioned earlier, in-person interviewers have the advantage of being able to

develop a rapport with the residents and to answer any questions the respondent might have right at that moment. In addition, the interviewers carried an official letter that was written simply but provided some general information about the nature and purpose of the study. These letters could be slipped under doors when residents were not home or were hesitant to answer the door and could therefore help to reassure residents about the legitimacy of the project.

Ultimately, the team decided that a face-to-face survey would offer the following advantages:

- increasing the proportion of the population that could be included in the study;
- reducing concerns about residents' literacy levels; and
- increasing residents' cooperation because of the personal interaction with the interviewers.

The project team knew from prior experience that all of these advantages could be achieved while maintaining reasonable data collection costs and collecting high-quality data.

Chapter 3 Designing Surveys

3.0 Introduction

Designing a resident satisfaction survey that is *simple*, *easy to use*, *and still gets all the information you need* for making management decisions is challenging. It is very easy to fall into traps like writing questions that are too hard for people filling out the survey to understand. You also need to format surveys so they are easy to fill out. Therefore, it is critical to take the time to carefully design your questionnaire beforehand, particularly when the interviewees will be people who may have problems with comprehension. This chapter provides an overview of techniques to make surveys easy to use; methods for testing survey instruments; and strategies for handling sensitive topics. All of these will help you design a better resident satisfaction survey for your PHA. Examples from the Chicago Housing Authority (CHA) Resident Satisfaction and Management Needs Survey highlight specific rules for survey design and describe the process of developing and testing the survey.

3.1 Make the Survey Easy to Use

Keeping the questionnaire simple is one of the most crucial elements of designing an effective and useful survey. *The survey needs to be simple enough that it can be easily understood by all residents.*

Good surveys are:

- ⇒ Easy to read;
- **⇔** Easy to understand; and
- **⇔** Easy to fill out.

And they result in:

- ➡ Fewer mistakes; and (thus)
- ➡ Accurate information.

Having an easy-to-complete survey is particularly important if you plan to do a self-administered survey. As discussed in Chapter 2, many public housing residents may have difficulty filling out surveys without help. But even if you are having interviewers or staff

administer the survey, it is important to keep the questionnaire as simple as possible. With a well-designed survey, the interviewers will make fewer mistakes, the residents will have an easier time accurately answering the questions, and you can be more confident about the accuracy of the information you collect.

3.1.1 Writing Questions

Good survey questions are short and clear, include all the definitions or other information interviewees need to answer them, and have clear answer choices. Floyd Fowler (1995), an expert on survey design, lists five key elements for a successful survey:

- *Questions need to be consistently understood.* All residents must be able to understand the questions and interpret them the same way.
- Questions need to be consistently administered. This means that if interviewers or PHA staff are administering the survey, they need to read the questions the same way to every resident they interview. The same introductions, explanations, and definitions must be used every time.
- Residents need to be able to understand the kind of answer that is expected. For example, residents need to know how to answer a question, whether they should provide a number, a ranking on a scale, or choose one of the answers provided. An example of a bad question is, "When did you move to this development?" The possible answers could include: "When I was 16" or "In 1979." A better way to ask the question is to say, "In what year did you move into this development?"
- All residents need to have all the information needed to answer the question accurately. All terms should be clearly defined so that it is clear what you are asking about.
- Residents must be willing to answer the question. This means being careful about asking residents about sensitive subjects (e.g., income, barriers to employment, drug use) and assuring residents that their answers will be kept confidential. This is particularly important for doing a PHA resident satisfaction survey, where participants may fear that the way they answer a survey could affect their housing assistance.

Writing simple questions that get the information you really want can be harder than you think! The example below provides an illustration of several of the pitfalls of writing survey questions. The people who designed this survey wanted to get a lot of precise information about their residents, and made the mistake of trying to put too much into a single question.

Since the fall of 1997, has there been a time when you couldn't afford to pay your rent because of the cost of housing, or have you been able to increase the amount of rent you
pay?
Couldn't pay rent 1
Same
Increase

There are several problems with this question:

- It is *much too long and wordy*.
- It requires the resident to make a *retrospective comparison* (i.e., to try to remember how things were in the fall of 1997 compared to now). Questions that rely on respondents' memories are often unreliable. People tend to *telescope*, which means that they may be thinking about things that really happened a longer time ago than what you are asking.
- It is asking two different things: 1) was there a time when you could not afford to pay your rent, and 2) can you afford to pay more rent than you could before?
- It includes the answer choice of "same" even though it is not explicitly offered as a choice.

There are several ways to improve this question. A very simple way to ask this question would be to say: "Can you afford to pay more, less, or about the same amount of rent as you could 12 months ago?" Another alternative would be to ask two questions: "Since we interviewed you 12 months ago, have you had a time when you couldn't afford to pay your rent?" If the respondent says "No," then you could follow with a question that asked, "Since we interviewed you 12 months ago, have you been able to increase the amount of rent you pay?"

Fowler (1995) lists several other rules for writing good survey questions:

Ask people about their firsthand experiences, feelings, and perceptions.

- Avoid asking for secondhand information if possible (e.g., "Was anyone else in the household the victim of a crime last year?");
- Try to avoid hypothetical questions (e.g., "If the PHA hired more janitors, would it improve maintenance in your development?"); and
- Try to avoid asking the person you are interviewing to speculate about what might be causing something (i.e., "Has the new management improved conditions in your building?") or about solutions to complex

problems (e.g., "What would it take to reduce vandalism in your building?").

Ask one question at a time.

• Avoid questions asking two questions at once or "double-barreled questions" (i.e., "Would you like to go to school or have a job?").

⇒ Avoid leading questions.

 Avoid questions that steer the respondent to a particular answer (i.e., "Most residents favor spending more money to replace refrigerators. How do you feel?").

₩ Word questions so that every respondent is answering the same question.

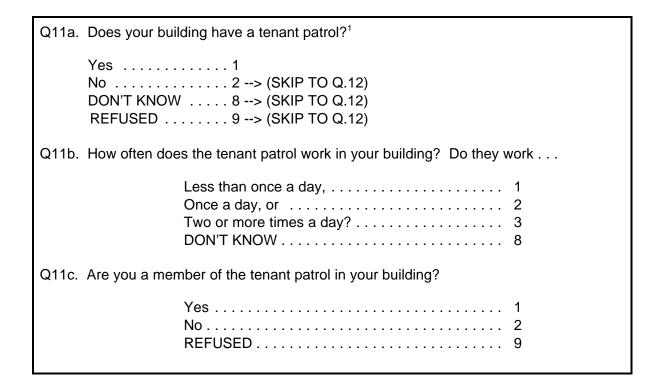
• Avoid complex language and provide definitions if necessary. Make sure time frames are clear (i.e., "In the past 12 months," or "Since we interviewed you 12 months ago").

Give respondents all the information they need to answer the question.

- Include definitions in the question (i.e., "Please think about the inside of your building—the stairwell, hallways, elevators, and lobby of your building—and inside your apartment"); and
- End the question with answer choices (i.e., "Tell me if broken light bulbs are a big problem, some problem, or no problem in those areas inside your building").

3.1.2 Types of Survey Questions

Some questions ask for *factual information*. Again, when asking factual questions, you will want to make them clear, provide clear time frames, and avoid complicated questions by asking multiple questions if necessary. The question below is an example of a two-part factual question with clear time frames. This is not the kind of question you would want to use in a self-administered survey because it includes both skip patterns (see page 25) and instructions to the interviewer that are written in capital letters.



Other types of questions ask about *subjective states*, that is, how people feel (e.g., "How safe do you feel outside your building at night?") or how they evaluate a service (e.g., "How satisfied are you with maintenance in your building?"). These questions often use scales such as "strongly agree, agree, neither agree nor disagree, disagree, strongly disagree" or ask respondents to rate something from one (strongly disagree) to ten (strongly agree). Other questions might ask people to name their top three choices or their most important reason for favoring something. Basic rules for subjective questions are (Fowler 1995):

- Be clear about what you are asking people to rate; and
- Use a scale that is easy to understand.

An example of a subjective question and scale is shown below. Most experts now recommend including a middle category, such as, "Neither satisfied nor dissatisfied."

All capital letters indicates an answer a respondent may give but that the interviewer does not read as a possible response.

Another way of asking about people's attitudes is to ask them to rate how they feel about several different items. However, questions that ask for a numerical ranking (e.g., "What are your top three reasons for wanting to move to a new neighborhood?") are often difficult for respondents to answer. If you are doing a telephone survey, it is particularly hard for respondents to keep several different answers and their ratings in their heads. It is better to use multiple questions instead. The example below asks respondents to rate a series of different crime-related problems as a "big, some, or no problem in their building." Using this technique, you may be able to determine what residents perceived as the most serious problems in their buildings more effectively than if you had asked, "What are the three worst problems in your building?"

Another advantage to asking multiple questions using the same scale is that it allows you to combine the information to create a stronger measure. For example, the question shown below was used to create a figure that represents residents' overall perceptions of the severity of crime in their building: the percentage of respondents who answered that one or more of the items was a big problem. Thus, using multiple questions about a single topic both provided a rating of the worst problems, and allowed easy summarization of the information into a single measure.

Please think about the inside of your building—the stairwell, hallways, elevators, and lobby of your building—and inside your apartment. Tell me if the following items are a big problem, some problem, or no problem in those areas <u>inside</u> your building.

Note that this set of questions includes the answer choices (which are read, at least twice and then repeated as necessary).

	Big problem,	Some problem,	No or problem?	DON'T KNOW	
REFUSED					
a. People being attac or robbed? Is that		2	1	8	9
b. People selling drug Is that a		2	1	8	9
c. People using drugs	3? 3	2	1	8	9
d. Young people controlling the build	ling? . 3	2	1	8	9
e. Groups of people just hanging out? .	3	2	1	8	9
f. Graffiti, that is, writ painting on the wal		2	1	8	9
Note: Item f includes an examp	le of how to inc	dude a defin	ition of a term		
g. Shootings and violence?	3	2	1	8	9

3.1.3 Formatting the Survey

Formatting the questionnaire is as important to a successful resident satisfaction survey as writing clear questions. Again, a well-designed survey is one that is easy to fill out. In a self-administered survey, respondents will make fewer mistakes and will be more likely to complete the questionnaire. Likewise, in-person and telephone interviewers will make fewer errors and staff will spend less time reviewing completed surveys. Finally, good formatting will make it easier for you to compile and analyze the survey data.

There are no standard formats that researchers use for designing surveys. The most important thing is to be consistent throughout the questionnaire. Some recommendations are:

• For telephone and in-person surveys, put all instructions to interviewers in capital letters (i.e., "SKIP TO Q10"). For self-administered surveys, all instructions should

- be clearly written out in full sentences (i.e., "Please circle all answers that apply"). To emphasize a sentence or phrase, either use bold or underline.
- For telephone and in-person surveys, use parentheses around phrases that the interviewer has the option of reading to the respondent, if necessary. For example, a definition of a word might be included in parentheses. You can also include definitions in parentheses in a self-administered survey, although it is better just to use simple and clear language.
- Be clear when an interviewer is supposed to read the answer categories aloud and when he/she is *not* supposed to read the answer categories. As noted above, one way to be clear is to type answer categories in all capital letters that are *not* supposed to be read out loud. This rule does not apply to self-administered surveys.
- Use a font that is large enough to be easily read, and do not squeeze too many questions onto one page. For self-administered surveys, make the document attractive; include graphics or other "user-friendly" guides as needed.
- Consider including categories for "don't know" and/or "refused" on each question
 for telephone or face-to-face surveys. For self-administered surveys, you may want
 to selectively include these codes so that you do not encourage the respondents to
 select one of those categories instead of thinking more about the question. The
 numeric codes assigned to the "don't know" and "refused" responses should be
 consistent across questions.

Skip Patterns

"Skip patterns" are instructions to interviewers to skip certain questions if they do not apply to a particular respondent. It is important to make sure that all skip patterns are consistent, clearly indicated, and correct.

There are several ways to indicate a skip. As shown below, one method is to include a box with an instruction.

IF R LIVES IN A ROWHOUSE, SKIP TO Q.10, P.5.

During the past 12 months, were the elevators not working for more than 24 hours?

 Yes
 1

 No
 2

 NO ELEVATORS
 7

 DON'T KNOW
 8

 REFUSED
 9

Another way to indicate a skip is to include an instruction next to the answer choice:

During the last 12 months, have you seen drug dealing inside your building?

Yes 1

During the last 12 months, how often have you seen drug dealing <u>inside</u> your building? Would you say. . .

A third way to handle skip patterns and follow-up questions is to format the questions so they are side by side as shown below.

This set of questions asks about problems you may have had with your apartment in the past 12 months. (Was/Were) (ITEM) broken at any time during the past 12 months?

IF YES: Was it fixed in the last 12 months?

Yes	No E	on't Know	Yes	No	DK
a. The stove? 1	2	8	1	2	8
b. The refrigerator? 1	2	8	1	2	8
c. The plumbing in the kitchen? 1	2	8	1	2	8
d. The plumbing in the bathroom? . 1	2	8	1	2	8
e. The glass in the windows? 1	2	8	1	2	8
f. The electrical outlets or					
light switches? 1	2	8	1	2	8
g. The locks on the door to					
your apartment? 1	2	8	1	2	8

If you are doing a self-administered survey, it is best to avoid using skip patterns if at all possible. Skip patterns are confusing for trained interviewers; they will be extremely difficult, if not impossible for residents with low literacy levels to follow. If it is important for respondents to be able to indicate that a specific question does not apply to them, include the skip as an answer choice. In the next example, the last choice, "I don't want to move" serves as the skip, allowing the respondent to indicate that the question does not apply to him/her.

Better schools for my children	What i	is the main reason that you want to move? [CHECK ONE]
I don't want to mayo		Better schools for my children
i don't want to move 9		I don't want to move 9

The CHA Resident Satisfaction Survey (Appendix A) was formatted as an in-person, interviewer-administered survey. Telephone surveys generally follow the same formatting guidelines as in-person surveys. Appendix B contains an example of a group-administered survey (formatted the same as a self-administered survey) designed for HUD's Moving to Opportunity for Fair Housing Demonstration. When formatting your questionnaire, it is a

good idea to contact a local survey organization and request samples of previously-administered surveys to use as guides, particularly for telephone or self-administered surveys.

3.2 Testing the Questionnaire

It is always a good idea to test your questionnaire before "going into the field," that is, conducting the full survey. Unless you pre-test the questionnaire, you cannot be confident that the respondents will truly understand what you are asking them about. For example, in the CHA Resident Satisfaction survey, it was important that residents understood the questions as intended. To test the questionnaire, about five "think- aloud" interviews were conducted. Think-alouds are intensive one-on-one interviews where the respondent is asked to think out loud while answering the questionnaire. Some specific probes are added to the questionnaire that ask the interviewee how he/she came up with numeric responses (e.g., counting, estimating), remembered dates of events that happened in the past, and interpreted words or phrases in the questionnaire. Because the CHA survey was intended to assess the impact of HUD's takeover of the agency, the think-alouds focused heavily on what the residents knew about the HUD takeover. Were they aware that there had been a takeover? Were they aware of differences in management? Had they experienced any of the new initiatives such as development clean-ups or changes in security? It was also important to know whether residents understood terms such as "work order." The results of the thinkalouds helped to refine the final questionnaire and ensure that residents would indeed be able to understand it.

Another way to test questions is to hold a *focus group* with a small number of residents. A focus group is a group discussion facilitated by a trained moderator. It typically consists of 8 to 12 participants who are selected to participate based on certain eligibility criteria (e.g., residents of a specific development, high-school students, or participants in a training program). You might also use a focus group to elaborate on or assist in interpreting survey results. Another reason for doing a focus group would be to generate ideas about a specific topic or to obtain general information from "experts." Experts could be residents, site staff, community leaders, or anyone who can provide information about the topic being studied. Finally, you might do a focus group before the survey for strategic planning purposes. The group will help identify the group's needs and wants and develop ways of meeting those needs.

Focus groups should *not* be used to make statistical predictions or quantitative comparisons. The participants of a focus groups are not randomly selected and are not necessarily representative of the population as a whole. They are selected for specific reasons, and their responses are not necessarily generalizable to other residents.

Finally, the third method for testing your survey is to conduct a formal *pre-test*. A pre-test involves administering the questionnaire to a small number of residents using exactly the

methods you plan to use for the full survey (i.e., telephone, mail, or in-person). A pre-test allows you to test your method for administering the survey; for example, you can see whether residents will return a mail survey. However, it also allows you to identify problems such as questions that are poorly-worded or confusing, or that respondents are reluctant to answer.

For a self-administered survey, conducting a pre-test may not be as helpful in identifying problems with the questionnaire unless you conduct follow-up interviews with participants. One suggestion is to mail out (or distribute) the questionnaire to your pre-test sample and allow a reasonable amount of time for the residents to complete and return the questionnaire (for a mail survey, this is usually about three weeks). When you receive the completed questionnaires, you should review them carefully, paying particular attention to questions that residents skipped or to any comments they may have written in the margins—both of these signs can be indications that the question was difficult for residents to answer. You could also make a follow-up call to the participants to ask them how they felt about filling out the questionnaire, or call people who did not return their surveys to find out why they chose not to participate.

Three ways to test the survey:

- **⇒** Think-aloud interviews;
- **⇔** Focus Groups; and
- ➡ Pre-test

3.3 Handling Sensitive Questions

Many surveys ask about *sensitive subjects*, such as criminal victimization or drug and alcohol use. Income is generally regarded as one of the most sensitive subjects. In the PHA context, some subjects will be particularly sensitive (e.g., questions about crime in the development, income, employment, the number of people in the household, and problems such as substance abuse). Residents may be fearful of retaliation from criminals if they offer any information about crime in their development, and may avoid answering questions by saying, "I don't know." Likewise, if residents suspect that the PHA is using the survey to detect illegal occupancy or income, they may refuse to answer the questions or cooperate with the survey at all.

The easiest strategy is to avoid asking about any potentially sensitive subjects. If the PHA is seeking to do a simple resident satisfaction and management needs survey, then there is no

reason to ask about income, occupancy, or social service needs. However, if crime is a serious problem in the development, it may be desirable to ask about victimization (i.e., whether the resident has been a victim of a crime) or about criminal activity in the development. As mentioned above, if the survey is a needs assessment, then the PHA may want information about residents' employment history and personal or family problems. PHAs may also want to learn about the impact of welfare reform on residents and residents' needs for services to help them become self-sufficient. In this case, the survey would need to ask about employment, education, training, and current experiences with welfare.

If your survey must include some sensitive items, it is important to handle them very carefully. The most important thing is to make sure that respondents know that their answers will be kept confidential. In the CHA survey, which does include a number of potentially-sensitive subjects, participants were told that their names would not be associated with their answers and that no one at the PHA would know how they answered the questions. Experience suggests that if the survey includes a number of sensitive items that involve lease compliance, the PHA may want to hire a contractor to conduct the survey so residents can be assured that cooperating with the survey will not negatively affect them. Even if the PHA decides to do the survey in-house, it is important to ensure that no identifying information is included in the questionnaire (e.g., apartment numbers or names).

If the survey focuses on very sensitive issues (e.g., a needs assessment that asks about problems like substance abuse, child abuse, or domestic violence), then it is important to obtain *informed consent*; that is, inform respondents in advance about the subject of the survey and have them sign a formal consent form agreeing to be interviewed. Primarily, this protects both the participant—so that he/she is not taken by surprise with the subject matter—and the interviewer, in case the resident becomes upset by the questions.

It is not clear whether one survey method is better than another for asking sensitive questions. Some research has shown that self-administered surveys may be better than interview-administered surveys for asking about sensitive subjects. Survey researchers are still investigating this problem and trying to develop creative solutions, such as providing interview participants with laptops to enter their answers; this, however, may not be practical in the public housing setting.

For now, the best rule of thumb to follow is: when asking factual questions about potentially-sensitive subjects, make the questions as easy as possible for the participant to answer. For example, people are often reluctant to talk about their income and/or may have difficulty calculating it quickly. One way around this problem is to offer a series of income ranges as in the example below:

Now I'd like you to estimate your total household income for 1997. Please include all income including money earned from jobs, public assistance, or social security, for example. In 1997, will your income, before taxes be . . . (CONTINUE ON LADDER UNTIL YOU HEAR "NO")

More than \$10,000?	No 1
More than \$20,000?	No 2
More than \$30,000?	No 3
More than \$40,000?	No 4
	Yes 5
	DON'T KNOW 8

Design the questionnaire to minimize respondents' discomfort. For example, the CHA survey needed to include some questions about gang activity, a subject that is potentially sensitive. Residents have a legitimate fear of retaliation if they complain openly about gang activity. Further, some households may include active gang members. On the other hand, gangs are clearly a serious problem and important management concern for the CHA administration. Therefore, the questionnaire included specific questions about drug dealing and shootings rather than about "gang activity." In addition, it included a question about whether "young people controlling the building" was a big, some, or no problem. Pre-tests indicated that residents correctly interpreted this to mean "gangs controlling the building." These techniques make residents more comfortable answering the survey, even while standing at their doors. In addition to being careful about question wording, it is also important not to ask for a lot of detail about sensitive subjects (e.g., details about a sexual assault) unless that is the focus of the study. In that case, the participants must provide informed consent as discussed above.

Finally, pre-test the questionnaire to identify sensitive questions before going into the field. As stated above, pre-testing can help identify potentially-sensitive questions and alternative, less problematic ways of asking them.

3.4 The CHA Resident Satisfaction and Management Needs Survey

Designing a workable questionnaire for the CHA survey was very challenging. First, HUD (the client) was interested in a variety of subjects including maintenance, management, crime, security services, supportive services, and—particularly in the second round of interviewing—the impact of welfare reform on residents. Second, the questionnaires had to be kept short enough so that residents would be willing to answer them at their doors and interviewing costs would not be too high. Third, the survey had to be easy for residents with

very low literacy levels to understand. Finally, the survey had to include questions about a number of potentially-sensitive subjects, particularly crime, victimization, and employment.

To help make the task easier, the survey team took a number of questions from existing surveys. Questions that have been used in other studies are presumably more reliable because they have been tested and permit comparisons across different studies. In this case, the team was able to draw on a three-year study of crime in CHA housing that Abt Associates had conducted for the National Institute of Justice (Popkin et al. 1996). The team had used these questions in four waves of surveys and knew that residents would find them easy to answer. The team also drew on other studies, such as a study of the community policing program in Chicago known as the Chicago Alternative Policing Strategy, or CAPS (Skogan and Hartnett 1997), and a survey being used in HUD's Moving to Opportunity demonstration, underway in several cities. However, the team also had to write a number of new questions that were about issues specific to this project (e.g., maintenance and changes in programs since the HUD takeover). *Note: you should feel free to use or adapt any of the questions from the CHA survey for your own resident satisfaction surveys*.

Careful attention was paid to the content of the questionnaire. The number of sensitive questions was limited, and the questions were worded carefully so that residents would feel comfortable answering them.

As described above, the team tested the survey by conducting think-aloud interviews with a small number of residents. Since Abt Associates had been conducting surveys in CHA housing for three years using the same techniques, there was not a formal pre-test. However, you *should not* avoid pre-testing your questionnaire. Financial or time constraints can make skipping this step seem appealing, but the savings in the long run in terms of identifying problems up front makes it an extremely valuable tool.

The CHA Resident Satisfaction survey has been quite successful. Although it appears long, it actually takes only 10 to 15 minutes to administer, on average. The response rates have been very high (over 75 percent), and the refusal rates quite low, indicating that most residents feel comfortable answering the questions. The format is simple enough that the team was able to train residents to conduct the interviews.

In sum, by following the guidelines presented in this chapter, you should be able to design surveys that are easy to read, easy to understand, and easy to fill out. If your survey meets all of these criteria, and it is carefully administered (see Chapter 5), then you can be confident that the information you collect will be accurate and reliable.

Chapter 4 Sampling

4.0 Introduction

A *survey sample* is a subgroup of the population you are trying to study. Sampling is one of the most technical—and important—parts of conducting a resident satisfaction survey. This chapter will provide you with the tools to select a sample of respondents for your survey that will be representative of your entire resident population. Sampling issues are often frequently overlooked or side-stepped in order to make it easier to administer the survey. However, unless you sample carefully, your survey will reflect the views of only one segment of your resident population, such as those who were the easiest to reach, those who were the most cooperative, or those who had the most complaints.

There is no absolute rule of thumb as to how big your sample should be. If your PHA is small, your sample will necessarily be small. Generally, it is better to have a smaller sample with a good response rate (i.e., a high rate of people in your sample who answer your survey) than to have a larger sample with a low response rate. To see how well your sample represents your population, you should also compare the demographic characteristics of your sample to the statistics for the whole PHA.

This chapter discusses the factors to consider when designing and implementing a "sampling plan," including the reasons to sample, how to define the population you want to survey, what type of sample to choose, what sample size to aim for, and how to estimate and calculate sample rates and weights. Because these issues are complex, you may want to consider hiring a consultant to help you with your sampling plan—recruiting a faculty member or student from a local university is often a relatively inexpensive option. However, whether you hire a consultant or choose to develop your sampling plan in-house, the information in this chapter should help you think through the key steps in the process.

4.1 Population and Sample Definitions

It is important to have a clear picture of the *population*, or *universe*, that you are studying before you attempt to sample from it. In most cases, for a resident satisfaction survey, the population will be all of the adult residents of a given housing authority. *Your sample will be the subset of adult residents that are contacted and asked to complete a survey.* For example, you may have either a list of names of individuals living in public housing or a list of units; this represents your population. If you do not have the resources to try to survey the entire population, you would have to select some subset of the list, e.g., choosing every fourth

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name or unit on the list. Under this plan, you would be surveying a sample of 25 percent of your residents, who would then represent the views of all residents in your PHA.¹

When considering the population of interest for your survey, you also need to consider if the population is individuals, households, institutions, events, etc. You may also want to consider other factors that define your population such as geography (i.e., what developments or parts of the city they live in); individual characteristics (i.e., age, gender, race, or income); group membership (i.e., women with children, single people); and household characteristics such as housing type (i.e., townhouse, high-rise, low-rise) or apartment characteristics (i.e., number of bedrooms). Generally, the best rule of thumb is to keep your definition as simple as possible (e.g., all PHA residents or all residents of family housing).

The simplest strategy to follow is a *census*, in which you interview a resident of every unit in your housing authority. If your PHA or the development you are surveying has fewer than 300 units, conducting a census may make sense. However, if your PHA has more than 300 units, you will probably want to select a smaller proportion of the residents to survey. Surveying a sample rather than the whole population will mean:

- reduced costs;
- a shorter data collection period; and
- faster data processing and analysis.

In survey terms, survey samples may be *convenience samples* (also known as nonprobability samples) that are generally used for exploratory research. Convenience samples are basically a group of people you decide to survey because it is convenient, such as residents attending a tenant council meeting. *Probability samples* are systematically selected (e.g., a random sample of residents from all family buildings), and the results from the survey can be generalized to the entire population from which they were drawn. Public opinion surveys and political polls are probability samples meant to represent the views of a large population, such as a city, state, or country. Surveys of convenience samples (e.g., residents at a tenant council meeting) are *not* generalizable to a larger population (all PHA residents). In social science research, they are generally used to generate questions—not to answer them—while surveys of probability samples might be used to make policy decisions.

There is no predetermined, accepted standard of quality or sample size for every sample selected. The danger that emerges is a tendency to want to overgeneralize from a sample or to make conclusions that are too broad based on the quality of the sample and corresponding

A common mistake is to sample from a population that is smaller than the entire "universe of study." You cannot assume, for example, that one building is representative of all your housing, even if you were to randomly select and interview half the residents of that building. Such a strategy would make the building, not the housing authority's population as a whole, the universe of study.

Exhibit 4-1 Survey Sample Types

Census	Convenience	Probability (or, Random)	
✓ Simple strategy: interview a resident from every unit ✓ Allows you to know the entire defined population's thoughts on the survey topic ✓ Good method for small PHAs ✗ More cumbersome for larger PHAs	✓ Simple strategy: interview a convenient group of people (such as those attending a resident council meeting) ✓ Allows you to get quick feedback from a defined group ✓ Generally used to <i>generate</i> , rather than <i>answer</i> questions ✗ Results will not be representative of your entire population	✓ More sophisticated strategy: residents are randomly selected to participate ✓ Results can be generalized to your entire defined population ✓ Results can be used to make policy decisions	

data. It is important to recognize and acknowledge the limitations of your sample. If you are only able to afford to survey residents from a small number of your PHA's properties, then your results will likely not be generalizable to the entire population of residents. However, they may still provide you important information about the views of residents of those types of properties.

4.2 Sample Designs

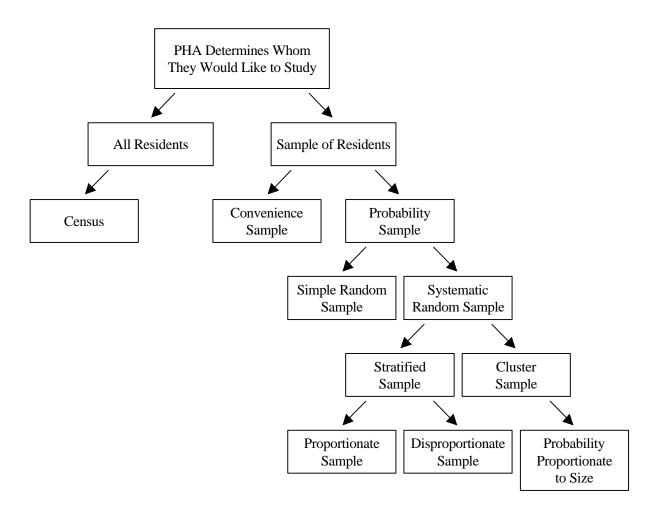
There are a variety of different types of sampling strategies; factors such as the size of your PHA, the resources you have available, and the types of questions you want to answer will all influence your decision about what kind of sample to use. If you only have limited resources, and you just want some quick feedback about a particular program or issue affecting one development, a survey of a convenience sample of residents may serve your purposes.

However, if you are conducting a resident satisfaction survey, you are likely to want to choose some type of probability sample.

As mentioned above, a census of your residents is the easiest and simplest strategy to follow. However, unless your PHA is very small, this approach will not be practical. If you need to sample, the easiest strategy is to select a *random sample* of your residents (e.g., selecting every third household on a list). If your PHA is very large or spread out, another alternative (used in the CHA Resident Satisfaction Survey) is to use *cluster sampling* to select a sample

of developments or buildings to survey. You can either conduct a census of residents in those properties or select a sample (i.e., selecting every other unit).

Exhibit 4-2 Sampling Strategies



Some of the factors that will affect your decision about what sampling strategy to are:

- → *The size of your PHA population*. The size of your resident population and developments will affect the strategy you choose.
- The objectives of your study. The objectives you define will help determine what type of sample is necessary to achieve your goals.
- ➡ The population of interest. In other words, who is the group that you wish to learn something about (e.g., all adult public housing residents, public housing residents living in senior housing, or security guards assigned to public housing developments)?

- **The data collection method.** Will the survey be administered in-person, by telephone or by mail?
- The types of analyses or comparisons to be made. Do you need to make comparisons across specific categories (e.g., perceived levels of crime among individuals living in high-rise versus low-rise housing)?
- The resources that are available. Consider what financial, staffing, and software resources are available.

This section describes how to use some of the simpler types of sampling strategies, and provides some recommendations about how to choose the approach that is most appropriate for your resident satisfaction survey. More complex sampling strategies are discussed in Appendix C.

4.2.1 Simple Probability Samples

There are two types of probability, also known as random, samples: simple random samples and systematic random samples. A *random sample* is defined as a sample in which every person in the population has a known, non-zero (although not necessarily equal) probability of being selected for the survey.²

A *simple random sample* is the least complicated form of sampling, and probably the best strategy to use for small and medium-sized PHAs that are too large for a resident census. However, if your PHA's properties are spread out over a large area, you may want to use cluster sampling (see Appendix C) to reduce transportation costs.

Simple random samples are samples for which the probability of selection is equal for all people in the sample, and the sampling is done in one step, or "stage." One way to produce a simple random sample is to use a random numbers table (see example in Appendix D). If you have a population list (e.g., a list of residents and phone numbers), you would first number the list from 1 to N (N equals the number of units in your PHA or the number of residents in a given development). Then using a random numbers table (starting anywhere on the table and moving in any direction—top to bottom, left to right or vice versa) you begin to select your sample. An example of how to select a sample using a random numbers table is shown in Exhibit 4-3.

Another type of simple random sample is to use what is called a *systematic random sample*. This means taking the same numbered list of your population (residents) and select every Xth case to become part of your sample. In order to create a systematic random sample, you need to (a) determine the necessary sampling interval (the "X") which is defined as the number of

² This section assumes you are selecting individuals. However, the same guidelines would apply if you were selecting from a list of units (as was done in the CHA Resident Satisfaction Survey).

Exhibit 4-3 Selecting a Sample Using A Random Numbers Table

Step 1: Number your list of leaseholders and units from 1 to 600 (assuming a list of 600 residents). It will look like this:

001 Joe Smith

002 Betty Jones

003 Martha Daniels

004 Samantha Johnson

Maria and Roberto Hernandez

Step 2: Select a row of random numbers from table. It will look like this:

34886 86421 01357 67274 27030 71650 65300 23664 01896 69378

Step 3: Group numbers in groups of three; disregard all numbers greater than 600 or excess numbers. The numbers you will use to draw your sample are shown in bold:

348 868 642 **101 357** 672 703 **071** 650 653 **002 366 401** 896 693

Step 4: Start listing your sample.

Your sample thus far will include residents number 348, 101, 357, 071, 002, 366, and 401.

Step 5: Repeat until you have reached the desired sample size.

people (or units) in the population divided by the desired sample size; and (b) to select a random starting point on the list which can be done using a random numbers table. For example, if you had a list of 600 leaseholders and wanted to end up with a sample of 200 residents to survey, the survey interval would be three, so you would select every third one.

It is important to be sure that your list is not ordered in any systematic, non-random way. For instance, if you are sampling every other person off of a list and it turns out the list is ordered male-female-male-female, etc., your sample will contain all males or all females and will not be representative of the population. Lists that are arranged alphabetically can generally be considered to be random.

Sampling from a list can present several types of problems:

- The list may contain duplicates;
- Some names (or units) may be omitted from the list; and
- If you are sampling from a list of units, some may be ineligible (i.e., offices or service centers).

You will need to make sure that your list of residents is as complete as possible before you begin to draw the sample for your resident satisfaction survey.

To learn about more complex sampling issues, including stratified and cluster sampling, the probability proportionate to size selection method, panel surveys, and sampling weights, see Appendix C.

4.3 Sample Size

Determining the appropriate size of the sample is a skillful process in which you need to consider what information is being obtained from the survey, while taking into account the availability of resources to administer the survey. As stated earlier in the chapter, there is no one accepted formula to determine the appropriate sample size for any given survey; if you have a small PHA, your survey will necessarily be small. However, general rules of thumb have been proposed. One such rule is that you should obtain a minimum of 100 completed questionnaires within each major categorical breakdown and a minimum of 20 to 50 completed questionnaires within each minor categorical breakdown. Another option is to review what researchers are doing in similar situations and use those numbers as a guide. Typically however, the resources you have available will be the most significant determinant of your sample size.

Eventually, you may want to consult a statistician to help guide you in determining how precise the results of your data will be, given certain sample sizes. You can contact a local university to find a statistician (or a student) to help you conduct these analyses. You can also contact a professional survey organization. The best resource for locating a reputable survey organization is the American Association for Public Opinion Research's (AAPOR) *Blue Book* listing, which can be found on the Internet (www.aapor.org).

Determining the number of completed interviews that are required for your study does not necessarily determine the sample size. Other factors need to be considered such as eligibility or screening criteria (e.g., you might only want to talk to people who have lived in their units for more than six months), as well as the proportion of the sample you expect to be able to contact, and the proportion who will cooperate. The University of Illinois Survey Research Laboratory, which worked with Abt Associates on the CHA Resident Satisfaction Survey,

used the estimated sample rates shown in Exhibit 4-4 to calculate a proposed sample size prior to data collection.

Exhibit 4-4
Estimated Sampling Rates

	Percentage ^a	Sample Size
Non-duplicate units (total sample size)	100%	1597
Non-vacant units	57%	910
Residential units	87%	792
Housing units contacted for screening	96%	760
Housing units cooperate to screening	86%	654
Households eligible for study (eligibility rate)	96%	628
Selected respondents in eligible households contacted for final interview	100%	628
Selected respondents who complete the survey	99%	622

^aNote that the percentages in each row are calculated relative to the number in the row above. For example, the sample size of 792 units in the third row is 87 percent of the sample size of 910 units listed in the second row.

In thinking about these issues, it is often helpful to work backwards from the desired number of completed interviews to calculate the total sample size you will need to select. Using the numbers in Exhibit 4-4 as an example, if you wanted to obtain 622 completed surveys from your sample, work backwards to an initial sample size of 1597.³ That is, under these assumptions, you would have to pick 1597 households for your sample to obtain 622 completed surveys. However, if you know which units are vacant and which are used as offices, you would only need 792 occupied, residential units to obtain the 622 completed interviews (under the assumptions in Exhibit 4-4).

³ To work backwards, divide the sample size in the bottom row by the percentage in the same row to get the sample size in the row above it. For example, dividing 622 by 0.99 equals 628. Continue the process until you get to the total sample size needed for the desired number of completed surveys.

4.4 Response Rates

The *response rate* is generally considered to be the best indicator of the success of the survey. The response rate represents the ratio of the number of completed surveys to the number of eligible elements (leaseholders or units) in the sample; however, it is not always clear what constitutes an "eligible" element. The group of respondents who do not complete the questionnaire generally fall into one of two categories: those who refuse to participate and those who cannot be reached. In both categories, it is likely that some percentage of those respondents are not eligible to participate (i.e., they would not meet your definition of the population of interest, such as residents who have lived in their unit for at least six months). As with sample sizes, there is no single agreed-upon figure for how good your response rate should be. Obviously, a higher response rate is better than a lower one; if you have reached more than 70 percent of the eligible residents, you can have more confidence that your sample accurately represents your PHA's population than if you have reached only 50 percent of the eligible sample. In general, having a higher response rate is more important than having a larger sample size; therefore, it makes sense to put your resources into following up with people who did not answer the survey rather than adding more names to your sample.

Survey researchers usually assume that the eligibility rate of respondents contacted would be equal to the eligibility rate of respondents you were unable to contact. Therefore, in Exhibit 4-4 above, since the eligibility rate is 96 percent, it is assumed that 96 percent of the respondents you were unable to contact and/or refused to cooperate with screening would also have been eligible for the survey.

Using the sample generated in Exhibit 4-4 above, and assuming those numbers now represent the final distribution of the sample upon completion of data collection, the response rate would be computed as follows:

- The known eligible elements include the 792 residential, non-vacant units;
- It is assumed that 4 percent of the 138 (792 minus 654) households that were not contacted for screening or refused are also ineligible (this calculates to six households);
- The total number of eligible elements in the sample is therefore 792 units minus 6 units, totaling 786 units;
- The total number of completed interviews is 622; and
- The response rate is 622/786 = 79.1 percent.

4.5 CHA Resident Satisfaction and Management Needs Survey

This section describes the sampling strategy for the CHA Resident Satisfaction and Management Needs survey. This example may help you think through what you need to do in selecting residents to survey for your PHA's resident satisfaction survey.

However, you should note that the CHA has many characteristics that made it necessary to use a sampling design that was much more complex than most PHAs will need to use. The CHA has over 40,000 units and 17 large family developments—many with more than 1,000 units. It also has a variety of different types of housing, including senior buildings, family high-rise developments, family low-rise developments (walk-ups and townhomes), scattered site housing, and some family housing that was built with state rather than federal funds. The developments are scattered around the city, and travel time between and within developments can be considerable. Therefore, developing a sampling design that would adequately represent this large and diverse population, while still remaining within resource limits, was a major challenge.

4.5.1 Defining the Population

As discussed above, the first step in selecting a sample is to define the population of interest. For the CHA survey, the population of interest was all households in federally-funded senior developments, family high-rises, and family low-rises, with at least one adult who had lived in their unit for the last 12 months. This population excluded households in scattered site and state-funded developments (also managed by the CHA), as well as households consisting of people who had only lived in their unit for a short time. In addition, because of the expense of hiring multi-lingual interviewers, the sample excluded the few households that did not have an adult who could speak English. The CHA population is nearly all African-American, but there are a few non-English speaking households in the senior developments. However, if your PHA has a substantial number of non-English speaking residents, this approach will likely not be appropriate for your survey.

Note that the population of interest was carefully designed so that it included most of the CHA's housing stock. However, it omitted important groups, particularly scattered site residents. The team opted to exclude the scattered site developments because of the need to be realistic about what could be accomplished with the resources (i.e., funding) available. The scattered site units are spread across the city; including them would have substantially increased costs for interviewer travel.

4.5.2 Choosing a Sampling Design

Resources also influenced the decisions about sample design and sample size. Although the client (HUD) initially hoped to be able to survey a large enough sample so that it would be possible to both make generalizations about conditions across the whole CHA population and about specific developments (about 3,000 households), limited resources made this sample

design unrealistic. While it was not possible to survey a large enough sample to analyze results by development, it was possible to use a design that would permit comparisons of the responses of residents from different types of developments. Therefore, the team chose a stratified sampling design and stratified the sample into three groups: family low-rise households; family high-rise households; and senior housing households. Working with a sampling statistician, it was determined that a sample of approximately 1,200 households would be large enough to make generalizations about the whole CHA population and about residents of each type of housing.

Because it would have been prohibitively expensive to list all the households in each of these groups (the CHA has 17 family developments, each with more than 600 units) and to conduct interviews at every possible public housing site, a simple random sample of all households was impossible. Instead, the team chose a method of cluster sampling, probability proportionate to size, to select the sample. (This procedure is described in Appendix C.) The first step was to choose a sample of developments using this method, and then to choose a sample of buildings within each development.

Once the buildings for the sample had been selected, units were randomly sampled in each of these buildings. For example, in the senior housing buildings, staff made a list of all of the apartment numbers in the building. In making the list, staff spoke with building management to remove all units known to be non-dwelling units, such as the manager's office. Then, on each floor of the building, the team selected every second unit on the list, starting at a randomly selected apartment number, to be in the sample.

Finally, when the research team conducted the interviews, they returned (at least five times) to households where the resident was not home until they were able to reach at least a minimum, acceptable response rate (around 75 percent) in each development (see Chapter 5).

4.5.3 Using Sample Weights

Once the data had been collected, the next step was to calculate sample weights—as described in Appendix C—to adjust the relative importance of the responses to more accurately represent the population from which the sample was drawn. The final weights reflected the sample design (probability proportionate to size in selected developments and buildings, and a 50 percent sample of residents in the selected buildings), as well as an adjustment for non-response (i.e., respondents who could not be contacted or refused to participate) within buildings. Calculating the weights for a complex sample design, such as the one used in the CHA survey, should be done in consultation with a sampling statistician or someone familiar with the process and methods.

4.5.4 Building on Survey Experience

Not all sample designs need to be as complex as the one described above. It was an ambitious design, because the results were intended to be representative for residents of three types of public housing developments in a large and diverse PHA. In another survey Abt Associates is conducting in CHA housing, the population of interest is the households in a single housing development that is being revitalized. For that survey, staff listed the address of each household in the development using information gathered in conducting the Resident Satisfaction Survey and information provided by the CHA. The list contained approximately 900 addresses. From that list, staff selected every third address (from a random starting point) to reach our desired sample size of 300. Since it is a simple random sample of the entire population of interest, every household gets the same weight. That is, since every household has the same chance of being in the survey, every household gets the same weight as long as no group (such as people in a specific building or age group) has a disproportionately high non-response rate.

Chapter 5 Survey Administration

5.0 Introduction

Once you have designed your resident satisfaction survey and selected a sample, you are ready to administer the survey to your residents. Even if your survey is well-designed and your sampling plan is sound, if your survey is poorly-administered, then you cannot be confident in the accuracy of the data you have collected. For example, if you do a self-administered survey and do not follow up to make sure that all respondents in your sample completed it, you cannot be sure that your results accurately represent the views of your PHA's residents. Similarly, if you do a telephone or in-person survey and your interviewers are poorly-trained and supervised, then you cannot be sure that the questions were asked consistently—or even at all. If you choose to conduct a resident satisfaction survey, it is worth investing the time and resources to ensure that it is done well.

This chapter provides an overview of how to administer effectively your resident satisfaction survey. Conducting a self-administered survey is relatively simple—indeed, as discussed in Chapter 2, the main advantage of a self-administered survey is that it is easy to administer and less expensive than other survey methods. Therefore, the chapter does not focus much on this type of survey here. Most of the material presented in this chapter focuses on telephone and face-to-face interviews, including recruiting and hiring interviewers; training interviewers; and actually conducting the survey. The guidelines presented here should help you to successfully administer your resident satisfaction survey. As in the other chapters, examples are presented from experiences with the CHA Resident Satisfaction and Management Needs survey, describing the choices staff made and the methods that were successful.

5.1 Staffing Decisions

In most cases, PHAs will need to decide what types of staff to use to conduct their resident satisfaction survey. If you opt for a self-administered survey, you will need staff to distribute the surveys (under residents' doors, through the mail, or at a group session), monitor the responses, and follow up with residents who do not return their surveys. If you opt for either a telephone or face-to-face survey, you will need to have interviewers and supervisors to conduct the data collection.

There are several different options for staffing your resident satisfaction survey, each of which have advantages and disadvantages. These options include:

Hiring a professional survey organization;

- Recruiting students from a local university;
- Hiring and training PHA residents;
- Using PHA staff; or
- Asking a resident council to administer the survey.

In making choices about how to administer your survey, you need to consider both the cost and quality of the data collection. The lowest-cost methods are often the most problematic, so you will need to review carefully your resources and choose the option that best fits your PHA's situation.

Hiring a *professional survey organization* to conduct your PHA's resident satisfaction survey offers a number of advantages, not the least of which is that it relieves PHA staff of the responsibility for designing and administering the survey. As mentioned in Chapter 4, the best resource for locating survey organizations is the American Association for Public Opinion Research's *Blue Book* directory, available on the Internet at *www.aapor.org*. A reputable organization will guarantee that the data collected will be high-quality. Such organizations generally employ experts in the fields of questionnaire development, sampling, survey administration, and data set construction. Their data collection procedures involve indepth interviewer training and intensive supervision and monitoring procedures. The major disadvantage of using a professional survey organization is that can be relatively expensive. However, in making your decisions about cost, it is worth weighing the cost of contracting out against the amount of PHA staff time that will be spent in administering the survey inhouse.²

Directly hiring interviewers (or assistants to distribute a self-administered survey) may help defray costs, although PHA staff will have to devote considerable time and resources to hiring, training, and supervising the interviewing staff. Inexperienced interviewers are generally paid between \$7 and \$10 per hour; therefore, in many cases, hiring interviewers may be less expensive than using PHA staff to conduct the survey.³ As noted above, one option is to *hire students from a local university* as interviewers and/or to help distribute and follow up a self-administered survey. However, while hiring students may be cost-effective, they will require a good deal of training and supervision.

¹ There are many types of professional survey organizations, many affiliated with local universities or research firms. There are also many that specialize in marketing surveys. It is worth checking into the reputation of any organization you are considering to hire before proceeding with your survey.

This is particularly relevant for face-to-face interviewing where the PHA would have to hire and supervise interviewers.

While these costs may be lower in rural areas, travel costs will be higher.

PHA residents were hired as interviewers for the CHA Resident Satisfaction Survey, with good results. You can either require any organization you contract with to hire residents, or hire and supervise them in-house. However, residents often have little or no work experience, and require even more intensive training and supervision than college students. In addition, if residents are asked to work in the developments in which they live, the risk of interviewer bias is increased because respondents may be reluctant to express their true opinions to someone they know. A general rule of thumb is that interviewers should not interview individuals they know personally.

Despite these disadvantages, PHAs are encouraged to hire residents to administer their resident satisfaction surveys. First, residents are familiar with the developments, and may therefore be more comfortable and less fearful on-site (this is particularly important in dangerous developments). Second, using residents as interviewers or administrators increases the legitimacy of the survey; respondents will likely be less suspicious of, more honest with, and more willing to speak with interviewers they perceive as being more like themselves. Finally, hiring residents provides meaningful employment experiences for your residents—several of the residents trained for the CHA Resident Satisfaction Survey were later hired to work on other survey projects.

However, if you do choose to hire residents, you should follow some basic guidelines. Residents should be selected based on qualifications and not on favoritism (i.e., not because they are a resident council member or community activist). Each resident applicant should be required to complete an application process including a one-on-one meeting with his/her potential supervisor and exercises to gauge the applicant's reading and speaking skills, and his/her ability to take direction.

You can also *use PHA staff to administer the survey*. Many PHAs will likely choose this option since it is easiest logistically. It is also relatively lower in cost than using a professional organization or a university, and less supervision is necessary than when residents are conducting the interviews.

However, there are two major disadvantages in using PHA staff to conduct your resident satisfaction survey. First, no matter what kind of survey you choose, administering the survey will take a fair amount of time, which means that staff will not be able to carry out their other responsibilities. At minimum, you will need one key person to oversee the survey, conduct training, and supervise other staff who are either conducting interviews or collecting completed surveys. Second, using PHA staff as interviewers for a telephone or in-person survey greatly increases the risk of interviewer bias, and will most likely decrease your cooperation rate (or conversely, residents may feel they have no option but to participate, but then may provide inaccurate information). Respondents may be reluctant to answer questions honestly, particularly when the survey contains questions about PHA activities, illegal

activities, or other sensitive issues. Finally, you run the risk of staff interviewing people that they know and thus violating respondents' confidentiality.

Asking a resident organization to administer the survey has many of the same advantages and disadvantages as using PHA staff. This method is logistically simple and relatively low cost. On the other hand, the risk of interviewer bias is high, as is the risk of violating confidentiality. Further, unless PHA staff are actively involved, the PHA loses control of the administration process and will have no way of knowing if the survey was administered consistently. This is particularly a problem for self-administered surveys; a group of residents with an agenda can easily skew the results by only giving the survey to respondents who share their views. However, if PHA staff are actively involved in overseeing the survey and have a good working relationship with the resident organization, this approach may prove both efficient and cost-effective.

Exhibit 5-1
Survey Administration Options

Hiring a Professional Survey Organization	Hiring Students or Residents as Interviewers	PHA Staff Conducting the Interviews	Asking a Resident Organization to Administer the Survey
✓ Experts are responsible for the design, sampling, and administration of the survey ✓ Data is of high quality ✓ Cost may be comparable to PHA staff's time ✗ Relatively expensive	✓ Helps defray costs ✓ Residents are familiar with the developments ✓ Interviewees are more likely to participate ✓ Provides meaningful employment experience for residents ✗ PHA staff must provide considerable time and resources to hiring, training, and monitoring interviewers ✗ Risk of residents interviewing people they know	✓ Easy logistically ✓ Lower cost than hiring a professional survey organization ✓ Less supervision is needed than when hiring interviewers ✗ Administering the survey will take considerable time away from staff's other duties ✗ Increases risk of interviewer bias ✗ May decrease the cooperation rate or result in inaccurate data ✗ Risk of staff interviewing people they know	✓ Easy logistically ✓ Low in cost ✓ Works if the PHA is actively involved and has a good relationship with the resident organization ✗ Increases risk of interviewer bias ✗ Increases risk of confidentiality violations ✗ PHA must be actively involved to know whether the survey is administered consistently

5.2 Staff Training

Once you have decided how to staff your survey, you need to train your staff. For a self-administered survey, this will be fairly simple. Unless you are doing a mail survey, you may have to provide instructions on how to distribute the survey, if for example, they are to deliver it to a specific sample of residents. You will also need to provide instructions about how to follow up (e.g., when to send reminder cards or how to follow up with a phone call). However, if you are doing a group administration (reading the survey to a group of respondents), you will need to train your staff in much the same way as you would train an interviewer.

If you are doing a telephone or in-person survey, you will need to carefully train your interviewers. Even professional interviewers working for a survey organization will need training that is specific to the project.

The first step is to develop *training material*, perhaps in the form of a short manual, outlining the project and the interviewers' responsibilities. The manual serves as a resource for interviewers to refer back to, which is especially important once they have started data collection. A manual is particularly important for face-to-face interviewers who will be out in the field (i.e., conducting interviews on-site). Incorporating appropriate visual aids such as maps, photographs, or charts can make the procedures more concrete for the interviewer, and can also make a relatively dry document more stimulating. For an in-person survey, the manual should include the following items:

- Overview of the survey. This section should include any relevant background information and a description of the purpose of the survey. When interviewers understand the purpose behind the survey, they are more motivated to work and to make sure that the data they collect is of high quality. They are also better prepared to answer respondent questions.
- Description of the sample. This section should include a description of how the sample was selected, why those buildings or units were selected, the size of the sample, and how the sample will be distributed to the interviewers. Also included in the sample description should be a definition of who is an eligible respondent (e.g., someone who has lived in their unit at least six months).
- Fieldwork procedures. This section focuses on what the interviewers should expect out in the field, and what is expected of them. This is where interviewer procedures should be discussed, including the interviewing schedule, the importance of neutrality and confidentiality, methods for gaining resident cooperation, and editing completed work. For in-person interviewers, any safety procedures should be outlined in this section. Also, a listing of common respondent questions and proper interviewer responses should be included as a one

- page sheet that interviewers can take with them door-to-door or refer to when they are on the phone.
- Questionnaire materials. The remainder of the training material should focus on the questionnaire and any other interview materials. Procedures for asking questions, using skip patterns, recording different types of responses (e.g., precoded or open-ended), clarifying responses, and probing (i.e., asking for more detailed answers) should be discussed here. This section should also include an overview of the questionnaire followed by question-by-question guidelines that should explain and clarify any confusing questions or instructions.

Even the best developed manual is not enough to prepare interviewers—particularly inexperienced interviewers such as students or PHA residents—for actually conducting interviews. You will also need to conduct a *formal training session* in which all the interviewing procedures are explained and any interviewer questions or concerns can be answered.

These training sessions should also include *mock interviews* in which interviewers are paired up and take on the roles of interviewer and resident. Supervisors should observe the pairs and give the interviewers instruction and feedback. If possible, it helps to pair more experienced interviewers with less experienced ones. In addition, the trainer can act as a difficult respondent by not answering the questions with one of the provided answer categories or by interrupting the interviewer. This provides opportunities for all interviewers to discuss how these situations should be handled. Role-playing also helps highlight problem areas in the questionnaire, and prompts questions that can be addressed with the group before actual interviewing begins.

The training for telephone interviewers should be similar. The manual should cover the same issues, except for a description of the field procedures on-site. During role-playing, more emphasis should be placed on the introductory script to help train interviewers on how to avoid refusals and to keep potential respondents on the telephone.

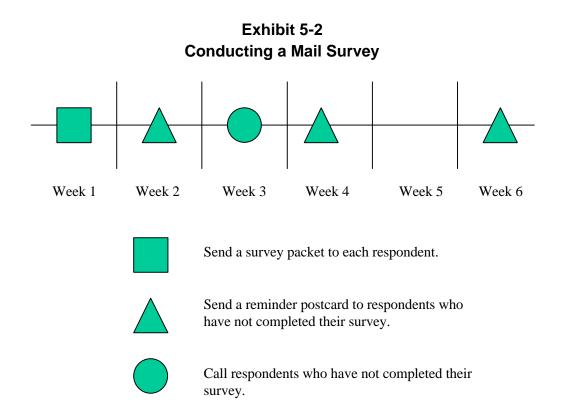
5.3 Administering the Survey

No matter how well-trained the interviewing staff is, they will need supervision and guidance once data collection has begun for your resident satisfaction survey. This section begins with some general interviewing procedures for all three survey types—self-administered, telephone, and in-person—including contacting the residents, supervising interviewers, and validating completed interviews. Additional survey procedures are discussed for face-to-face surveys, including site access and safety concerns. Following these guidelines will allow for a smoother data collection process and higher quality results.

5.3.1 Contacting the Residents

Survey organizations use some generally accepted guidelines to help staff determine the frequency with which respondents should be contacted for a survey. Most *self-administered surveys* follow the procedures outlined in Don Dillman's book, *Mail and Telephone Surveys: The Total Design Method.* Dillman suggests mailing (or delivering) the survey packet to all residents and following up one week later with a postcard reminding those who have not completed their survey yet to do so by a specified date and thanking those who have. Two weeks following the postcard mailing, a second mailing is sent to those who have still not completed their surveys, and two weeks after that a third mailing is sent.

Depending on resources available, it is a good idea to call the non-responders between the second and third mailing and remind them to complete their survey. In the telephone contact, you will be able answer questions about the survey, and determine why residents may be refusing to cooperate.



For *telephone surveys*, residents should be called at various times of the day and different days of the week to maximize the possibility of reaching the respondent. Calls may need to be made during the evening and weekend hours, to reach residents who work Monday through Friday. You should decide how many calls you are going to make before you determine that a

potential respondent is unreachable—most survey organizations make a minimum of ten contact attempts. If the interviewer reaches a disconnected number, he/she should call Directory Assistance and request an updated telephone number.

For each contact attempt (i.e., attempt to reach the resident), interviewers should make detailed notes that indicate the date and time of the call and any relevant information, such as when the respondent might return. If a resident refuses to participate, the interviewer should record as much information as he/she can about why the resident does not want to participate, and the likelihood of the resident's changing his/her mind. It may be helpful to have a different interviewer re-contact that resident. If a resident specifically asks not to be contacted again or is particularly hostile, you may decide to call that case a refusal and *not* attempt to reach him/her again.

Attempt to Contact Resident Via Telephone Note Date and Time of Contact Attempt No Answer Answer Respondent Respondent Busy Signal Disconnected Voice Mail or No Pick-up Available Not Available Number Answering Machine Repeat Contact Call Directory Do Not Leave Repeat Contact Respondent Respondent Determine and Note Best Time to Cooperates Refuses Attempt at a Assistance for Message; Repeat Attempt at Different Time Different Day/Time Re-attempt Contact Updated Number Contact Attempt at Different Day/Time Find Out Why and Re-attempt Contact Call New Number If No Number Conduct Record Information at Noted Time if Resident Still Fits Available, Note on Interview into Sample (i.e., still List: Cease Contact lives in sampling area) Attempts Respondent Respondent Hostile Not Hostile Do Not Attempt Recontact Later at Specified Time or Contact Again with Different Minimum Contact Attempts: 10 Interviewer

Exhibit 5-3
Conducting a Telephone Survey

As with telephone surveys, contact attempts for *face-to-face interviews* should be made at different times of the day and different days of the week, while keeping in mind that safety concerns may restrict the hours of data collection. If your resources permit, a minimum of five contact attempts is recommended before considering a resident unreachable. Refusals should be handled the same way as with telephone interviews; however, you should use more strict guidelines for dealing with hostile respondents—interviewer safety should always come first! In order to increase interviewer efficiency, you should get a list of currently vacant units from site managers before beginning data collection.

Exhibit 5-5

Conducting a Face-to-Face Survey Attempt to Contact Respondent at Home (Note Date and Time) Announce Self as Member of Survey Team; State in One Sentence the Sponsor and Purpose of the Survey Answer No Answer Follow Procedures Outlined for Leave Letter/Flier Explaining the the Telephone Survey Survey under Resident's Door Attempt Contact Again at Minimum Contact Attempts: 5 Different Day/Time

Chapter 5 • Survey Administration

5.3.2 Interviewer Supervision

Standard practice for telephone surveys is to periodically monitor—at random—interviewers' work. Survey organizations have monitoring systems that allow supervisors to patch into an interviewer's call and monitor his/her work at any given time. Most phone systems will permit more than one person to listen to a call; if you are administering the survey in-house, the supervisor should listen in on some of each interviewer's calls. Monitoring should be conducted more heavily at the outset of data collection to identify and correct problems (such as reading questions incorrectly or using a style that encourages unnecessary chatting) before they become too severe. It also provides an opportunity to give immediate feedback to the interviewers and for them to get answers to questions as they come up.

For face-to-face surveys, supervisors should spend some time going door-to-door with the interviewers and monitoring their work. Such direct supervision is important for several reasons. First, it allows the supervisors to observe the interviewers and ensure that the questions are being asked appropriately, responses are being recorded accurately, and that nothing is being said to bias the results. Second, as with telephone surveys, this method also allows supervisors to provide the interviewers with immediate feedback, both to correct problems and to praise positive techniques, and it allows the interviewers to ask questions when they come up. Third, it ensures that the interviewers are actually completing the work assigned and are not fabricating data. Finally, by being on-site with the interviewers, supervisors see firsthand the conditions in which interviewing is taking place; this makes the interviewers feel more secure in what they are doing, and it also allows supervisors to better address some of the safety and motivational problems discussed later in this section. It is especially important to include this type of monitoring at the beginning of the data collection period in order to address and correct any problems early on.

5.3.3 Reviewing and Validating Completed Interviews

Each interviewer should check his/her work before handing it in to a supervisor. The supervisor should then check and edit each completed questionnaire. *On-site editing* involves checking that all the necessary responses are recorded and that skip patterns (i.e., instructions to skip questions that do not apply) were followed correctly. In door-to-door surveys, it is best to retrieve any missing information as soon as possible, since the resident is most likely immediately available, and your returning to the site at a later date can be costly.

Validation is a process in which an interviewer's work is verified to make sure they filled out the questionnaire appropriately and did not falsify interviews. Typically, approximately 10 percent of each interviewer's work should be randomly selected and validated. Validation can be conducted by phone for both telephone and in-person interviews (if a phone number was

obtained during the initial interview). However, for face-to-face surveys, at least some validation will have to be done in person since many residents do not have telephones.⁴

Validation involves developing a "validation instrument" or short questionnaire. This questionnaire should include approximately five factual questions taken from the beginning, middle, and end of the questionnaire. It should also include a brief introduction explaining why the resident is being recontacted and instructions for asking any skipped or incorrectly-recorded questions.

5.3.4 Arranging Site Access

Arranging access is an issue that generally affects only in-person interviews—the only exception is for self-administered surveys, if assistants are delivering survey packets to residents' doors. If you are conducting your resident satisfaction survey in-house, gaining and arranging for access to the sites should not be an issue. However, if you are hiring a survey organization to conduct the survey, you will need to make sure they are given access to the developments, and make arrangements for their staff to have a meeting space on-site, such as a site manager's office, a resident council office, or a vacant, available apartment.

In addition, for any type of survey, it is a good idea to notify all relevant site staff—including site managers, resident council leaders, and security staff—about the data collection. It may be helpful to post flyers in the buildings or make announcements at resident meetings so that residents are not suspicious of unknown individuals walking in and out of the buildings. It may also be useful to have a simple, brief, introductory letter that can be passed out at the site. The letter should say what the survey is about, who is sponsoring it, and who to call if more information is needed.

5.3.5 Safety Concerns

The conditions in public housing developments, especially those in older cities, are often more dangerous than in other communities. If you are doing an in-person survey, you must take any steps you can to increase the interviewing staff's sense of security. As stated above: *interviewers' safety always comes first!* During the CHA Resident Satisfaction Survey, staff left developments early several times because of safety concerns, and once suspended data collection altogether when it appeared that conditions in one development were simply too dangerous. These decisions undoubtedly reduced the final response rate, but there was no question that protecting the interviewers' safety was the first priority.

If on-site monitoring took place, those interviews that were monitored by a supervisor do not need to be validated as well.

In dangerous developments, it is a good idea to try to schedule the survey when school is in session and fewer people are "hanging out" in the development. This means that interviewing should take place during school months, Monday through Friday, between the hours of 10:00 a.m. and 3:00 p.m. In less dangerous developments, weekend or evening shifts might be possible in order to ensure that working residents are included.

If darkened hallways or stairwells are a concern, interviewers should be provided with flashlights. It is also a good idea to provide interviewers with whistles that they can use to signal for help or to keep track of one another within the building.

Whenever possible, interviewing should take place in teams. In multi-unit buildings, teams can be assigned to a floor or, in low-rises, a building. When interviews are taking place in rowhouse or single-family units, interviewers can be paired by block or development. The important feature of working in teams is that the interviewers can keep track of each other. One caveat: when teams are assigned, it is important that all the team members understand that they are working as a team and that they should not leave the area without informing the other members.

If they are available, having extra PHA or city police patrol the area during interviewing hours can reduce the chances of problems occurring. However, it is not a good idea to have security guards go door-to-door with the interviewers, because it may both affect respondents' willingness to cooperate with the survey and raise confidentiality issues. Some survey organizations use escorts; again, it is better if they do not go door-to-door with the interviewer, but rather remain nearby so they can assist if needed.

It is extremely important to stress to the interviewers that their safety is more important than completing interviews. They should never be required to enter an apartment or to enter a building alone—interviews can be conducted in hallways. Often, residents will warn interviewers if it is unsafe to be in a particular building or development on any given day. Any such warnings should be conveyed to a supervisor who can then decide the best course of action.

Following these procedures, you should be able to safely conduct surveys even in very dangerous public housing developments. Security was a significant problem in CHA housing when the survey was conducted. Although there were a number of potentially dangerous situations, including times when staff decided to withdraw from the site for the day, there was never a situation where an interviewer was threatened or harmed.

5.4 CHA Resident Satisfaction Survey

The CHA Resident Satisfaction and Management Needs Survey was a face-to-face interview. As discussed in Chapter 2, in-person interviews were the only realistic choice in CHA housing. Very few residents have working telephones, and poor mail service and widespread literacy problems ruled out conducting a self-administered survey.

Since it was a face-to-face survey, interviewers needed to be recruited, hired, and trained. Staff's primary concern was finding individuals willing to work in CHA housing—including high-rise buildings that are extremely dangerous—and who had the skills or ability to be trained as an interviewer. The team decided to hire and train CHA residents as interviewers for several reasons: first, because residents were more familiar with the buildings and more comfortable working on-site; second, it provided jobs for residents that could turn into long-term employment (as it did for a few residents who were later hired to work on other surveys); and third, residents were familiar with the CHA's resident council structure, and knew who to inform about the data collection and who to consult if problems occurred. To identify residents who might be qualified to be trained as interviewers, staff from the Survey Research Laboratory (which assisted Abt Associates in this endeavor) worked primarily with the CHA's Office of Resident Employment and Training. Since the team was doing other research in CHA housing, they also received referrals through word-of-mouth.

Using resident interviewers, most of whom had no prior interviewing experience, training and supervisory tasks were increased. Survey Research Laboratory staff developed a training manual as described in Section 5.2 and conducted a training session. The training ended by pairing up the interviewers and asking them to conduct mock interviews—experienced interviewers assumed a leadership role and were paired with less experienced interviewers.

Since the team consisted of outside contractors, they worked with liaisons in the CHA's central administrative office to obtain official permission for interviewing at each of the survey sites. CHA management staff approved the survey plans and notified key site staff of the data collection schedule—the site staff were notified by fax and mail.

The sample included three types of CHA developments: family high-rise, family low-rise and senior housing. For the large high-rise developments, staff made arrangements with site staff to use space at the on-site social service center. The interviewers and supervisors met at the site each morning and used the center as a home base during data collection. For the low-rise and senior developments, the interviewers were asked to pair up and work at the sites together—no on-site meeting space was arranged.

The interviewers made up to five contact attempts at each household, including one weekend attempt if safety permitted. Interviewing staff also contacted the site manager and obtained a list of all vacant units in the development, and pulled any vacant units from the sample. If a

resident refused to cooperate, the interviewers made a second contact attempt before considering the case as a refusal. If the resident was particularly hostile or specifically asked not to be contacted again, the case was considered a refusal after only one attempt.

The supervisors worked closely with the interviewers on-site in the high-rise buildings. During the first few days of data collection, they walked door-to-door with the interviewers and monitored a portion of their work. They reviewed the completed interviews as they were turned in. If any information was missing or unclear, they asked the interviewer to return to the household and retrieve the missing information. For the low-rise and senior buildings, the work was monitored by randomly validating a portion of each interviewer's work. Respondents were re-contacted and asked questions from the beginning, middle, and end of the questionnaire to verify that the interviewer conducted the interview accurately.

Because CHA's housing is dangerous, staff implemented several procedures to maximize interviewer safety:

- Interviewers worked in pairs;
- Interviewers were provided with whistles which were used to communicate with team members;
- Interviewers were provided with flashlights to navigate the darkened stairwells and hallways; and
- CHA security was alerted of the dates and times the interviewers would be working on-site each day.

These survey methods were successful. Despite extremely challenging conditions and inexperienced interviewers, the team obtained response rates of at least 75 percent—even achieving a response rate of 95 percent in the CHA's most dangerous development. The data were high quality and allowed the team to make meaningful statements concerning residents' views about conditions in their developments.

Chapter 6 Analyzing and Presenting Results

6.0 Introduction

Once you have conducted your resident satisfaction survey, the next step is to analyze the results and present the findings in a way that is useful for PHA staff and residents. A highly-technical research report will be of little value to PHA administrators trying to make management decisions—if it is too long and complex, decision-makers simply will not read it. On the other hand, a sloppy analysis or an incomplete report will produce information that could potentially be biased or misleading. *The heart of the challenge is to do a thorough analysis, and then present the results in an accessible manner.*

However, even if your report is clear and accessible, if it sits on a shelf it will not help improve PHA management. Therefore, the final step is to identify the appropriate audience for the information (administrators, PHA staff, HUD officials, residents), and then develop a strategy for distributing the report and/or presenting the information. You may want to use different avenues for distributing the results to different audiences. This chapter will help you choose options for analyzing your survey data and presenting your findings.

6.1 Analyzing Data

6.1.1 Data Processing

Processing your data includes three major steps:

- Editing the completed surveys:
- Entering the data into a database; and
- "Cleaning" the data to remove any data entry errors.

Following the formatting guidelines in Chapter 2 will make it relatively easy to compile the data from your resident satisfaction survey. The questionnaire should be laid out in such a way that it will be easy to enter the information accurately into a data base program.

Before entering the data, however, it is important to review the completed surveys to make sure that there are not any mistakes that will make entering the data difficult.

Common problems when filling out questionnaires are:

- ⇔ Circling more than one answer by mistake;
- **⇒** Filling in an answer incorrectly;
- **⇔** Skipping questions by mistake;
- ⇒ Not following skip patterns; and
- **⇔** Sloppily marking answers so that it is unclear what answer was intended.

Editing is particularly critical if you intend to send the questionnaires out to a data entry firm for data entry. There are many data entry firms that will enter survey data for a reasonable price.¹ The advantages to using a data entry service are that such services are often fast and will usually double-enter the data to make sure that it is entered correctly. Further, since PHA staff people may know the residents who participated in the survey, sending out the data entry reduces the risk of violating respondents' confidentiality. However, if you send the data out, you will have less ability to monitor the entry process or to answer questions about problems as they come up. Whether you send the data out or have PHA staff enter it in-house, carefully editing the completed surveys will help eliminate data entry problems and ensure a reliable data set (i.e., the computer file of all the survey data).

Once the data are entered, it is important to check for accuracy, or "clean the data." This process involves doing a simple tabulation and looking for obvious errors. A common problem is answer codes that are entered incorrectly (e.g., entering a 7 when the only valid choices are 1 or 2). These kinds of errors—most of which should be caught when editing the data before entry—need to be identified and corrected before you begin analyzing the data. Although data entry and cleaning can be tedious tasks, it is worth doing them correctly so that you can be confident that your results will be accurate.

6.1.2 Data Analysis

The next step is to begin analyzing your survey data. This process will be easier if you have in-house staff who can do statistical analysis. For simple tabulations—and some simple statistical analysis—you can use spreadsheet programs such as Lotus 1,2,3 or Excel. However, for more complicated analyses (e.g., comparisons across different types of housing) you will likely need some statistical software.

A survey organization should be able to give you a referral. You can find a list of professional survey organizations through the American Association for Public Opinion's *Blue Book* at www.aapor.com.

If your PHA does not have the capacity to conduct statistical analysis in-house, an inexpensive option is to contact a local university to see if you can hire a faculty member or graduate student to do the analyses for you. However, whether you analyze the data in-house or hire someone to assist you, it is always a good idea to have the person who will be responsible for the data analysis review the questionnaire before you start the data collection; an analyst will look for potential problems in the survey—such as questions with cumbersome skip patterns or an unclear context which will make interpreting a statistical analysis difficult—and may help identify clearer ways of asking particular questions.

The key to doing a useful analysis is first to revisit the goals you set at the beginning of your survey development process. Once you have done this, as shown in Exhibit 6-1, you can determine the level and complexity of the analysis you need to do (obviously, your choice of goals will also be affected by external factors such as staff capacity and the amount of time or funds available for analysis).

Exhibit 6-1
Goals for Data Analysis

Goal		Type of Analysis
Description of residents' views overall	➪	Simple tabulations and frequencies
Comparisons between groups	戊 〉	Simple statistical analyses (cross tabulations)
Assessing factors that affect residents' views	戊 〉	More complex statistical analyses (correlations, regressions)

Depending on the goals of your survey, data analysis can be either simple or complex. If all that you want is an overview of residents' answers, then a simple tabulation of results (number and percentage of all respondents who answered "very satisfied," "somewhat satisfied," "neither satisfied nor dissatisfied," "somewhat dissatisfied," or "very dissatisfied" with building maintenance, for example) should be sufficient. However, often the goal of analysis is to compare how different groups answered a specific question, such as whether residents in senior housing are more satisfied with building maintenance than residents in family housing.² Another goal of analysis might be to identify groups with particular needs;

Chapter 6 • Analyzing and Presenting Results

As noted in Chapter 4, you may need to weight your data in order to get accurate figures for subgroups of your resident population. Again, a statistician should be able to help you do this easily.

for example, if you are doing a needs assessment and want to know more about residents who say they are interested in getting job readiness services, you could do an analysis that cross-tabulates respondents' answers to the question about job readiness services with their demographic characteristics (i.e., age, race, gender, and education). Finally, if you are doing multiple surveys over time, you might want to know about how residents' views have changed; for example, you might want to see whether residents are more satisfied with building maintenance after a development is put into private management.

Finally, to answer more specific questions, you may need to do a more complex analysis. For the CHA Resident Satisfaction Survey, CHA administrators wanted to learn what types of factors affected resident satisfaction with maintenance, so that they would be able to identify specific areas they could improve to increase resident satisfaction; answering this question required doing a more complex statistical analysis using multiple regression techniques.

Your goals for your survey will determine the number and types of analyses that you decide to do. There is no need to do a complex analysis if all you are interested in is an overall picture of residents' views. *In general, the best strategy is to choose the simplest analysis that will meet your PHA's needs.* The simpler the analysis, the easier it will be to explain the results to a wide range of different audiences.

6.2 Disseminating the Results

Once the analysis is complete, the final step is to prepare a report or presentation and disseminate the results. A well-designed, well-administered, and carefully analyzed survey will do nothing to improve PHA management if it sits on a shelf. Further, survey results should ideally be shared with the residents along with a plan of action to address resident concerns. PHA management risks losing credibility if residents believe that survey results highlighting particular problems or concerns are being ignored.

Potential audiences for survey results and an action plan include:

- PHA administrators;
- PHA management staff;
- HUD officials;
- Residents:
- Administrators/staff from other PHAs seeking to learn from your experiences;
- Local media, particularly if the results indicate a success story;
- Local community organizations; and
- Researchers interested in public housing issues.

Once the audience(s) is identified, then the next step is to develop a strategy for distributing the report and/or presenting the information. You may want to use different approaches for

different audiences (e.g., preparing a report for administrators, doing a presentation for key staff, or putting a summary of results in a resident newsletter).

For a report to be widely used, it needs to be clear and accessible. Try to avoid reports that consist of nothing but statistical tables. Simple graphics and charts are easier to understand, and they make it possible to highlight particular findings of interest. Any text should be clear and avoid the use of housing authority jargon.

6.3 Example: Presenting Findings from the CHA Resident Satisfaction and Management Needs Survey

The findings from the CHA Resident Satisfaction Survey were presented to a group of high-level CHA administrators and HUD officials. Staff made statistical tables available as backup, but the presentation consisted of a series of charts and graphs. The presentation was created in PowerPoint, a graphics program that helps you design and deliver presentations. Because of this, the presentation consisted of color charts that helped to emphasize the findings. However, even black and white graphics can be very effective.

The first part of the presentation consisted of an overview of the project, including the project history and an overview of the presentation (see Exhibit 6-2). Project staff briefly explained the sampling and survey methods, discussed some of the challenges encountered in collecting the data, and presented the response rates and respondent demographics.

Exhibit 6-2

Presentation Overview

- This report presents the results from Wave 1 of the CHA Resident Satisfaction and Management Needs Survey conducted in the Fall of 1996.
- It includes discussions of residents' views about maintenance, crime, disorder, management, supportive services, resident empowerment, and security services.
- For each topic, we present comparisons between the different types of housing: Senior, Low-Rise, and High-Rise.

Then the presentation covered five different topic areas: Maintenance and Management, Crime and Disorder, Security Services, Special Analyses, and Conclusions and Recommendations.

The analysis staff did for the CHA Resident Satisfaction Survey required making comparisons between residents of three different types of housing: senior buildings, family high-rises, and family low-rises. Developing graphics that would show the differences between and within these three groups was challenging; however, with some work, staff were able to develop a system that included the results for all three groups within a single chart. Exhibit 6-3 shows two examples of how to present the results.

In addition to bar graphs, the presentation also included pie charts, sometimes showing responses to more than one question on a single chart. Using these techniques, it is possible to include a great deal of information in a single chart.

In addition to using graphics, each of the results slides included a simple sentence summarizing the contents of the chart. This technique explains the graphs and also provided staff with talking points for our presentation.

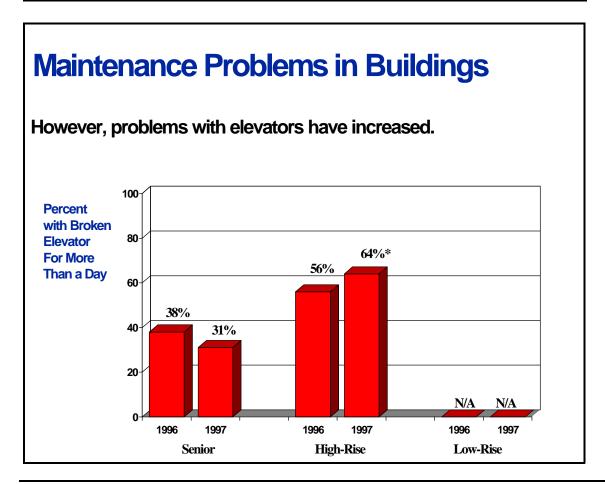
In other research Abt Associates and the Survey Research Laboratory have done in CHA housing, the team has disseminated results to residents in the form of a short newsletter. For the newsletters, staff would select a particular topic (e.g., maintenance) and highlight the survey results, often including a simple graph or chart. An example of one of these resident newsletters can be found on page 66.

Overall Satisfaction with Building In general, residents of Senior Housing are the most satisfied with their buildings: 100 ☐ Somewhat Satisfied 78% Percent 70% Satisfied with Building 60% 54% 53% 52% 39% 43% 40 48% 45% 39% 41% 20 35% 11% 14% 9% 1996 1997 1996 1996 1997 1997

High-Rise

Low-Rise

Senior



UIC Safety Study

Project Update

Thanks to everyone at Ickes, Horner and Rockwell! You made our last round of data collection a huge success. We interviewed one adult from 79% of the households in nine selected buildings. We can now see how things have changed in these buildings over time. We asked the same questions every six months. We can compare the answers and see what is better and what is worse.

We also conducted some longer interviews with residents and staff. These

Thanks for Your cooperation!

interviews help us get a better picture of what life is like at each development.

In this issue, you can see what residents think about the **maintenance** of their building.

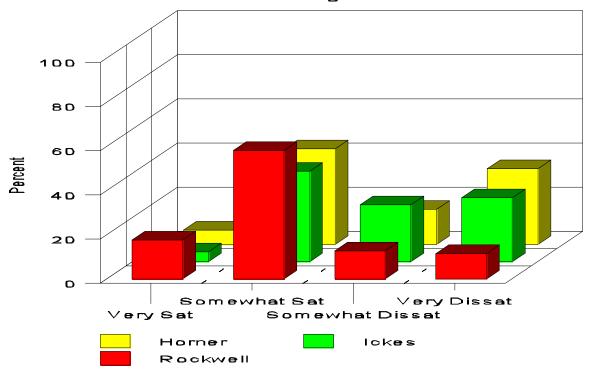
The incinerator will be backed up till Monday. I mean just packed. If you want to empty your garbage you can't just go out there and open the incinerator. You've got to go all the way downstairs. . .

That is what one resident from Ickes had to say about maintenance in December 1995. Many residents seem to be unhappy with the maintenance in their building.

The graph at the bottom of this page shows "How satisfied residents are with the maintenance of their building" in Dec. 1995. On the back, you can see how residents felt about graffiti, trash and broken light bulbs.

In This Issue...





6.4 Conclusion

Remember, a resident satisfaction survey that is well-designed and well-implemented can be a powerful management tool. Surveys can highlight successes, help PHAs monitor and improve their performance, and identify resident needs. Surveys can even help to improve relations between the PHA and residents—presenting residents with survey results and an action plan can help residents feel that the PHA is open and responsive to their concerns.

This guidebook provides you with the tools to conduct a successful—and useful—resident satisfaction survey of your PHA's residents. Following the guidelines and examples presented here, you should be able to:

- Select an appropriate survey method;
- Design a simple, easy-to-use survey that gathers all the information you need;
- Choose a sampling strategy and draw a representative sample of your residents;
- Successfully administer the survey so that the results are unbiased and your response rates are high; and
- Analyze and present your results in a way that is useful for PHA staff and residents.

Remember, too, that there are many resources available to help you conduct your PHA's resident satisfaction survey including the materials cited in this guidebook, universities, and professional survey organizations who can provide assistance. You should also feel free to adapt the CHA Resident Satisfaction and Management Needs survey for your own PHA.

Designing and administering a survey in the right way takes time and effort. However, if you take the time to do your survey correctly, you will have results that are unbiased and useful—and can help you to improve your PHA's management.

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Abt Associates Inc. References 68

Appendix A Face-to-Face Survey: The CHA Resident Satisfaction and Management Needs Survey

October 1997

Study #	765
Wave #	6
Case ID #	
Int. ID #	
OMB#	2577-0209

CHA RESIDENT SATISFACTION SURVEY

Survey Research Laboratory University of Illinois at Chicago

Abt Associates, Inc.

TIME	INTERVIEW ST	ΓARTED (24-hour clo	ock):		:					
1.	On the whole,	how do you feel abo	ut your	buildin	g as a pla	ce to live? A	re you			
		Very satisfied, Somewhat satisfied Somewhat dissatisf Very dissatisfied? . DON'T KNOW REFUSED	,			1 2 3 4 8				
2.	How satisfied are you with the maintenance of your apartment over the past 12 months? Are you Very satisfied,									
		Somewhat satisfied Somewhat dissatisf Very dissatisfied? . DON'T KNOW REFUSED	ied, or			3 4 8				
3.		estions asks about pi Was/Were) (ITEM) br							past	
						IF YES: V the last 12				
			<u>Yes</u>	<u>No</u>	<u>DK</u>	<u>Yes</u>	<u>No</u>	<u>DK</u>		
	a. The stove?	?	. 1	2	8	1	2	8		
	b. The refrige	rator?	. 1	2	8	1	2	8		
	c. The plumb	ing in the kitchen?	. 1	2	8	1	2	8		
	d. The plumb	ing in the bathroom?	. 1	2	8	1	2	8		
	e. The glass	in the windows?	. 1	2	8	1	2	8		
		cal outlets or nes?	. 1	2	8	1	2	8		
	g. The locks of your apart	on the door to ment?	. 1	2	8	1	2	8		
4a.	Do you have a	any work orders in for	r repairs	s?						

		No
		DON'T KNOW 8> (SKIP TO Q.5)
		REFUSED
	4b.	How long have you been waiting for the repairs to be made? Would you say
		Less than one week, 1
		One to four weeks, 2
		One to three months, 3
		Three to six months, or 4
		More than six months? 5
		DON'T KNOW 8
		REFUSED 9
5a.		nter, was there any time when you did not have enough heat in your apartment for nan 24 hours?
		Yes
		No
		DON'T KNOW 8> (SKIP TO Q.6)
		REFUSED
		ow many days in a row was your heat out? (IF MORE THAN ONCE): How many ys in a row was the heat out the longest time?
		1 day or 2 days in a row 1
		3-6 days in a row 2
		7 days in a row or more 3
		DON'T KNOW 8

6.	Next I'd like to ask some questions about the maintenance of your building. How satisfied or dissatisfied are you with the maintenance of your building over the past 12 months? Would you say
	Very satisfied, 1
	Somewhat satisfied, 2
	Somewhat dissatisfied, or
	Very dissatisfied? 4
	DON'T KNOW
	REFUSED 9
7.	During the past 12 months, has the CHA painted over the graffiti in your building?
	Yes
	No
	DON'T KNOW
	REFUSED
	IF R LIVES IN A ROWHOUSE, SKIP TO Q.10, P.5.
8.	During the past 12 months, were the elevators not working for more than 24 hours?
	Yes 1
	No 2
	NO ELEVATORS 7
	DON'T KNOW
	REFUSED 9

9. Please think about the inside of your building--the stairwell, hallways, elevators and lobby of your building--and inside your apartment. Tell me if the following items are a big problem, some problem, or no problem in those areas <u>inside</u> your building.

	Big <u>problem,</u>	Some problem, or	No problem?	DON'T <u>KNOW</u>	REFUSED
People being attacke or robbed? Is that a		2	1	8	9
b. People selling drugs?		2	1	8	9
c. People using drugs?	3	2	1	8	9
d. Young people controlling the building	g?.3	2	1	8	9
e. Groups of people just hanging out?	3	2	1	8	9
f. Graffiti, that is, writing painting on the walls?		2	1	8	9
g. Shootings and violence?	3	2	1	8	9
h. Rape or other sexual attacks?	3	2	1	8	9
I. Trash and junk in the halls and stairwells?		2	1	8	9
j. People breaking in or sneaking into homes to steal things?		2	1	8	9
k. Broken light bulbs tha are not replaced for a least 24 hours?	t	2	1	8	9
People using vacant apartments?	3	2	1	8	9

10. (Now let's go over these activities again, but this time) Please think about the area right outside your building--the parking lots, the lawns, the street, the sidewalks right outside your building. (Tell me if the following items are a big problem, some problem, or no problem in those areas outside your building.)

		Big problem,	Some problem, or	No problem?	DON'T <u>KNOW</u>	REFUSED
a.	People being attacked or robbed right outsid your building? Is that a	е	2	1	8	9
b.	People selling drugs? Is that a		2	1	8	9
C.	People using drugs?	3	2	1	8	9
d.	Groups of people just hanging out?		2	1	8	9
e.	Graffiti, that is, writing or painting on the wal of the building?	ls	2	1	8	9
f.	Shootings and violence?	3	2	1	8	9
g.	Rape or other sexual attacks?	3	2	1	8	9
h.	Trash and junk in the parking lots and lawns?	3	2	1	8	9

11. How safe do you feel or would you feel being out alone in the parking lots, the lawns, the street or sidewalks <u>right outside your building</u> at night? Do you feel . . .

Very safe,	1
Somewhat safe,	2
Somewhat unsafe, or	3
Very unsafe?	4
DON'T KNOW	3
REFUSED	9

How safe do you feel being alone inside your apartment at night? Do you feel . . .

12.

	Very safe,		1		
	Somewhat safe,		2		
	Somewhat unsafe, or		3		
	Very unsafe?		4		
	DON'T KNOW		8		
	REFUSED		9		
13.	Please tell me if any of the following things have ha household on CHA property in the past 12 months.		to you or	to anyone	in your
		<u>Yes</u>	<u>No</u>	<u>DK</u>	REF
	a. Was anyone in your household's purse or jewelry snatched from them?	. 1	2	8	9
	b. Did anyone in your household have something taken by force?	. 1	2	8	9
	c. Was anyone beaten or assaulted?	. 1	2	8	9
	d. Was anyone stabbed or shot?	. 1	2	8	9
	e. Was anyone sexually attacked?	. 1	2	8	9
	f. Did anyone try to break into your home to steal something?	. 1	2	8	9
	g. Was anyone caught in a shootout?	. 1	2	8	9
	h. Did bullets come into your apartment?	. 1	2	8	9

14a.	Durin	g the las	last 12 months, have you <u>yourself</u> heard gun shots in your development?					
			Yes	1				
			No	2> (SKIP TO BOX)				
			DON'T KNOW	8> (SKIP TO BOX)				
			REFUSED	9> (SKIP TO BOX)				
	14b.		the last 12 months, how many times have you heard oment? Would you say	gun shots in your				
			1 or 2 times,	1> (SKIP TO BOX)				
			3 or 4 times,	2> (SKIP TO BOX)				
			5 to 10 times, or	3> (SKIP TO BOX)				
			More than 10 times?	4				
			DON'T KNOW	8> (SKIP TO BOX)				
			REFUSED	9> (SKIP TO BOX)				
		•	ne last 12 months, how <u>often</u> have you heard gun sho ou say	ots in your development?				
			Every day or almost every day,	1				
			A few times a week,	2				
			A few times a month, or	3				
			Once a month or less?	4				
			DON'T KNOW	8				

IF R LIVES IN A ROWHOUSE, SKIP TO Q. 16a. P.8.

15a.	5a. During the last 12 months, have you seen drug dealing inside your building?					
		Yes				
		No				
		DON'T KNOW	,			
		REFUSED	9> (SKIP TO Q.16a)			
	15b. During the last 12 months, how often have you seen drug dealing inside your buil Would you say					
		Every day or almost every day,	1			
		A few times a week,	2			
		A few times a month, or	3			
		Once a month or less?	4			
		DON'T KNOW	8			
		REFUSED	9			
16a.	During the las	t 12 months, have you seen drug dealing <u>outside</u> you	ur building?			
		Yes	1			
		No	2> (SKIP TO Q.17a)			
		DON'T KNOW	8> (SKIP TO Q.17a)			
		REFUSED	9> (SKIP TO Q.17a)			
	•	the last 12 months, how many times have you seen olding? Would you say	drug dealing <u>outside</u>			
		Every day or almost every day,	1			
		A few times a week,	2			
		A few times a month, or	3			
		Once a month or less?	4			
		DON'T KNOW	8			
		REFUSED	0			

17a.	Do CHA police patrol in this development (including driving or walking through the development)?					
		Yes1				
		No 2> (SKIP TO Q.18a)				
		DON'T KNOW				
		REFUSED				
	17b. How sa Are you	tisfied or dissatisfied are you with the CHA police service in your area?				
		Very satisfied,1				
		Somewhat satisfied,2				
		Somewhat dissatisfied, or				
		Very dissatisfied? 4				
		DON'T KNOW				
		REFUSED				
	•	ast 12 months, have you noticed more, fewer, or the same number of <u>CHA</u> patrolling on foot, in a car, or on a bicycle in your building or development?				
		More				
		Fewer				
		Same2				
		DON'T KNOW				
		REFUSED				

18a.	Are there any security guards assigned to your building?						
		Yes					
		No					
		DON'T KNOW					
		REFUSED					
	18b.	How often do you see guards in your building? Would you say					
		Every day,					
		Four to six days a week,2					
		One to three days a week, or					
		Less than once a week? 4					
		DON'T KNOW 8					
		REFUSED					
	18c.	How good a job do you think the guards are doing to prevent crime in your building? Would you say					
		Very good,1					
		Good, 2					
		Fair, or 3					
		Poor? 4					
		DON'T KNOW					
		REFUSED					
	18d.	How good a job do you think the guards are doing to make people less scared of crime in your building? Would you say					
		Very good, 1					
		Good, 2					
		Fair, or					
		Poor?					
		DON'T KNOW					
		REFUSED					

18e.	How satisfied are you with the way security treats you and your guests? Are you .
	Very satisfied,
	Somewhat satisfied, 2
	Somewhat dissatisfied, or
	Very dissatisfied? 4
	DON'T KNOW
	REFUSED

19. Now I'd like to read you a list of services that are sometimes available to residents. Please tell me whether or not you have this service in your building or development. Does your building or development have . . .

IF YES: Have you or has anyone in your household used that service in the past 12 months?

		<u>Yes</u>	<u>No</u>	DON'T <u>KNOW</u>	<u>Yes</u>	<u>No</u>	DON'T <u>KNOW</u>
a.	Education or job training services?	. 1	2	8	1	2	8
b.	Child care services or the Head Start program?	1	2	8	1	2	8
C.	The drug and alcohol prevention center such as the CADRE Center?	. 1	2	8	1	2	8
d.	Parenting programs such as Mama Said?	. 1	2	8	1	2	8
e.	Youth or sports programs such as						
	Midnight Basketball?	. 1	2	8	1	2	8
f.	After school programs?	. 1	2	8	1	2	8

20a.	Does y	our building have a tenant patrol?
		Yes
		No
		DON'T KNOW
		REFUSED
	20b.	How good a job is the tenant patrol doing to report crime in your building? Would you say
		Very good,1
		Good, 2
		Fair, or 3
		Poor? 4
		DON'T KNOW
	20c.	How good a job is the tenant patrol doing to make people less scared of crime in your building? Would you say
		Very good,1
		Good, 2
		Fair, or 3
		Poor? 4
		DON'T KNOW
	20d.	How often does the tenant patrol work in your building? Do they work
		Less than once a day, 1
		Once a day, or
		Two or more times a day? 3
		DON'T KNOW
	20e.	Are you a member of the tenant patrol in your building?
		Yes
		No
		DEFLICED

21.	If the CHA gave you a	choice, would you prefer to	
		Stay in your current development . 1	
		Live in another CHA development, 2	
		Receive a Section 8 voucher or certificate, or	
		Live in scattered-site housing? 4	
		DON'T KNOW 8	
22a.	These last questions v	will help us understand some basic informat	ion about your household
	and apartment. Do yo	ou currently work for pay?	
		Yes	1
		No	2> (SKIP TO Q.23)
		REFUSED	9> (SKIP TO Q.23)
	22b. Do you work full-	-time or part-time?	
		Full-time	1
		Part-time	2
23.	Does anyone else livir	ng in your household currently work for pay?	
		Yes	1
		No	2
		REFUSED	9
24.	Are you currently a stu	udent or attending classes either full-time or	part-time?
		Yes	1
		No	2
25.	Are you currently in a	job training program?	
		Yes	1
		No	2

26.		ext I'd like to ask you some question veryou gotten income from	ons about other sources of income.	in the pa	ast 30 days
	a.	Supplemental security income or	· SSI?	<u>Yes</u> 1	<u>No</u> 2
	b.	Other disability pay like SSDI, ve or workers compensation for a w	eteran's disability benefit ork-related injury?	1	2
	C.	Unemployment compensation (b off from a job)?	ecause you were laid	1	2
	d.	Casual work or under-the-table job babysitting, housecleaning or wo food.		1	2
	e.	Food stamps?		1	2
	f.	Cash from public aid including A (Aid to Families with Dependent Temporary Assistance to Needy		1	2
IF Q.2	e6f I	S "YES," SKIP TO Q.28.			
27.	Ha	ave you <u>ever</u> received cash from p	ublic aid including AFDC or TANF?		
		Yes			
		No	2	> (SKIP T	O Q.29)
28.	Нс	ow many years <u>in total</u> have you re	ceived public aid (AFDC or TANF)	? Would	you say
		Less than one	e year, 1		
		One to two ye	ears, 2		
		Three to five y	years, 3		
		Five to ten ye	ars, or 4		
		More than ten	years? 5		
		DON'T KNOV	V 8		
		REFUSED	9		

29.	including money earn	timate your total nousend ed from jobs, public assis re taxes be (CONTIN	stance or social secu	ırity for exam _l	ole. In 1997,
		More than \$10,000?	No	1	
		More than \$20,000?	No	2	
		More than \$30,000?	No	3	
		More than \$40,000?	No	4	
			Yes	5	
		DON'T KNOW		8	
		REFUSED		9	
30.	How many years have	e you lived in CHA housin	ıg?		
					years
		DON'T KNOW		98	
		REFUSED		99	
31.	Including yourself, ho	w many people live in this	s apartment, includir	ng all a <u>dults a</u>	<u>nd chil</u> фeople
		REFUSED		99	
32.	How many children ur	nder 18 years of age live	with you?		_ children
		REFUSED		99	
33.	What is your date of b	oirth?	(MM/DD/YY):	/	
		REFUSED		999999	

34.	What is the highest grade or year of school that you have completed?
	None 00
	Grade school 01 02 03 04 05 06 07 08
	High school
	College
	Some graduate school
	Graduate or professional degree
	DON'T KNOW 98
	REFUSED 99
35.	What race do you consider yourself to be? Are you
	White, but not of Hispanic origin, 1
	Black, but not of Hispanic origin, 2
	Hispanic, 3
	Asian or Pacific Islander, or 4
	Something else? (SPECIFY) 5
36.	We may want to contact you again to verify some of the information you gave us. Do you have a telephone number where you can be reached?
	NO TELEPHONE
	REFUSED 9
37.	And can I have your first name so that we'll know who to ask for?
	REFUSED 9
Thank	you for your time and assistance.
TIME	INTERVIEW ENDED (24-hour clock): : :

38.	RECORD GENDER OF RESPONDENT.
	MALE 1
	FEMALE 2
39.	RECORD TYPE OF RESIDENCE.
	SINGLE-FAMILY DETACHED HOME 1
	DUPLEX OR SEMI-DETACHED 2
	TOWNHOUSE OR ROWHOUSE 3
	LOW-RISE (2-3 STORIES)
	MID-RISE (4-6 STORIES)
	HIGH-RISE (MORE THAN 6 STORIES) 6

Appendix B Self-Administered Survey: A Portion of the MTO Baseline Survey

MTO PARTICIPANT BASELINE SURVEY

	BATCH 1-2/							
te:/	2							
A Name: Anytown Housing Authority	FAMILY ID 3-18/ CARD 19-22/000							
	NAME							
First		Middle			La	st		
Social Security Number:	· _							
INTRODUCTION								
I am going to be reading all of the questions. Ans as shown in the example	wer each ques	tion by eith	er filling i	in the bl	ank lir	ne or c	checki	
Do you have any question				J			•	
Sample Questions								
A) What year wer	re you born? _		_ (YEAR)	[WRITE I	T ON TI	HE LINE	:]	
B) What kind of h G_1 Apartme G_2 Single-f		live in nov	v? [CHECK	(ONE]				
G_3 Other								
G ₃ Other C) How would yo Very good	u feel about m Good	oving to a	different p Bad	olace? [ONE]		

SECTION I - HOUSING INFORMATION

The first set of questions asks about the places you have	e lived.	
1) Have you ever applied for a Section 8 voucher or certi	ificate before today? [CHE	ECK ONE]
G ₁ YES G ₂ NO		25
2) How long have you lived in your apartment or house?	months OR	_years
3) How long have you lived in your neighborhood?	26-27/ 28-29/ months OR 30-31/ 32-33/	_years
4) Have you moved more than three times in the past five		
G ₁ YES G ₂ NO		34
5) How long have you lived in the Anytown area?		
months ORyears 6) Have you ever lived outside the Anytown area?		
G_1 YES G_2 NO		39
7) Have you ever lived in a neighborhood where the peop	ple were	
A) A mix of African-American and White?	G₁ YES	G ₂ NO 40
B) A mix of African-American and Hispanic?	G ₁ YES	G ₂ NO 41
C) A mix of Hispanic and White?	G ₁ YES	G ₂ NO 42
D) A mix of African-American, Hispanic, and Whit	e? G ₁ YES	G ₂ NO 43
E) Mostly White?	G₁ YES	G ₂ NO 44
The next set of questions asks about moving to other nei		
8) Would you like to move to another house or neighborl	nood?	
G ₁ YES		45
G_2 NO		

9) V	Vhat is t	the main reason you want to move? [CHECK ONE]	46-47/
	G₁	Better schools for my children	
	G_2	To be near my job	
	G_3	To have better transportation	
	G_4	To get a job	
	G_5	To get away from drugs and gangs	
	G_6	To get a bigger or better apartment	
	G_7	To be near my family	
	G_8	Other	
	G_{99}	I don't want to move	
10)	What is	the second most important reason you want to move? [CHECK ONE]	48-49/
	G_1	Better schools for my children	
	G_2	To be near my job	
	G_3	To have better transportation	
	G_4	To get a job	
	G_5	To get away from drugs and gangs	
	G_6	To get a bigger or better apartment	
	G_7	To be near my family	
	G_8	Other	
	G_{99}	I don't want to move	
11)	Where v	would you like to move? [CHECK ONE]	50-51/
	G_1	Somewhere else in my neighborhood	
	G_2	A different neighborhood in Anytown	
	G_3	A different neighborhood in the suburbs	
	G_4	A different city outside the Anytown area	
	G_5	Other	
	G_{99}	I don't want to move	
12)	What ki	nd of neighborhood would you most like to live in? One that is[CHECK ONE]	52-53/
	G_1	Mostly African-American	
	G_2	Mostly Hispanic	
	G_3	Mostly White	
	G_4	A mix of African-American and White	
	G_5	A mix of African-American and Hispanic	
	G_6	A mix of Hispanic and White	
	G_7	A mix of African-American, Hispanic, and White	
	G.	Other	

children are White? [c	-	NI /	ъ.	.,	54/
Very good	Good	Not sure	Bad	Very bad	
$\mathrm{G}_{\scriptscriptstyle{5}}$	G_4	G_3	G_2	${\sf G_1}$	
14) How would you children are White?	feel about hav	ing your child	ren attend a	a school where almos	st all of the
Very good	Good	Not sure	Bad	Very bad	
G_5	G_4	G_3	G_2	${\sf G_1}$	
15) How would you fe	el about living	in a neighborh	ood where <u>r</u>	more than half of the p	people earn
more money than you					56/
Very good	Good	Not sure	Bad	Very bad	
G_5	G_4	G_3	G_2	${\sf G_1}$	
16) How would you fee	el about living ir	n a neighborho	od where <u>al</u>	most all of the people	e earn more
money than you? [CH	ECK ONE]				57/
Very good	Good	Not sure	Bad	Very bad	
G_5	G_4	G_3	G_2	G_1	
G₂ Goo G₃ Fair	ellent condition od condition condition r condition				
18) Where you live no	ow, how much o	of a problem is	[CHECK ON	E]	
A) Walls with p	• • •			NE]	59/
Big problem G ₃	Small probl G_2		olem at all G₁		
O_3	G_2		O ₁		
B) Plumbing tl					60/
Big problem	•	· ·	olem at all		
G_3	G_2		G_1		
C) Rats or mic					61/
Big problem	Small probl	em No prol	olem at all		
G_3	G_2		G_1		
		on the door to	vour unit?		62/

67/

68-80/B

8) Where you live now	w, how much of a p	problem is[CHECK ONE]	
E) Broken wind Big problem	ows or windows w Small problem	ithout screens? No problem at all	6
G_3	${\sf G}_2$	G_1	
F) A heating sy	stem that doesn't v	vork?	6
Big problem	Small problem	No problem at all	
G_3	G_2	G_1	
G) A stove or re	efrigerator that doe	esn't work?	6
Big problem	Small problem	No problem at all	
G_3	G_2	$_{ extsf{G}_{1}}^{ extsf{G}}$	
H) Exposed wir	e or electrical prob	olems?	6

No problem at all

 G_1

No problem at all

 G_1

No problem at all

 G_1

Big problem

 G_3

Big problem

 G_3

I) Too little space?

Big problem

 G_3

Small problem

 G_2

Small problem

 G_2

Small problem

 G_2

CA R D 19- 22/ 000 2	TION II - NEIG	HBORHOOD				
The next qu	uestions ask	about your n	eighborhood.			
		owing staten		escribes h	ow satisfied yo	ou are with your
G ₂ S G ₃ Ir G ₄ S G ₅ V	Yery satisfied somewhat sate the middle somewhat districted for the satisfications ask	satisfied ed	'n vour neighl	oorbood R	v safoty. Wo mos	an being safe from
-	ed, attacked		n your neigns	ornood. By	y saiety, we mea	an being sale from
2) How safe	-	king lots and s	idewalks near	your neighb	orhood school?	Would you say
	ry safe	Safe	Unsafe	•	Very unsafe	_,
	G_4	G_3	G_2		G_1	
3) How saf	e do you fee	el at home alo	ne at night? \	Nould you s	say	25/
Ve	ry safe	Safe	Unsafe	,	Very unsafe	
	G_4	G_3	G_2		G_1	
4) How saf	e are the str	eets near vou	r home durin	the day?	Would you say.	26/
	ry safe	Safe	Unsafe		Very unsafe	
	G_4	G_3	G_2		G_1	
5) How saf	e are the str	eets near you	r home <u>at ni</u> g	ht? Would	you say	27/
Ve	ry safe	Safe	Unsafe	'	Very unsafe	
	G_4	G_3	G_2		G_1	
_		about proble	-		1 .	
o) ili your	neignbornoc	u, now bau o	i a problem is	•••		
	Litter or tras l Big problem	h on the stree Small prol	ts or sidewall blem No pro		ONE]	28/
	G_3	G_2		G_1		
		iting on the w Small problem		all		29/
_	G_3	G ₂	p - 2.2	G ₁		

G ₃ G ₂ G ₁ 6) In your neighborhood, how bad of a problem is	
6) In your neighborhood, how had of a problem is	
of in your neighborhood, now bad of a problem is	
D) Drug dealers or users? Big problem Small problem No problem at all G_3 G_2 G_1	31/
E) Abandoned buildings? Big problem Small problemNo problem at all G_3 G_2 G_1	32/
The next questions ask about services in your neighborhood.	
7) How long does it take you to get to the nearest bus or train stop? Less than 15 to 30 30 to 45 45 minutes More than 15 minutes minutes to 1 hour 1 hour G ₁ G ₂ G ₃ G ₄ G ₅	33
8) How long does it take you to get to the grocery store you use $\frac{most\ of\ the\ time}{most\ of\ the\ time}$? Less than 15 to 30 30 to 45 45 minutes More than 15 minutes minutes to 1 hour 1 hour G_1 G_2 G_3 G_4 G_5	34/
9) How long does it take you to get to the nearest park or playground? Less than 15 to 30 30 to 45 45 minutes More than 15 minutes minutes to 1 hour 1 hour G_1 G_2 G_3 G_4 G_5	35/
10) How long does it take you to get to your church or place of worship?	36/
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ble
11) How long does it take you to get to the doctor, health clinic, or hospital you use	
most of the time?	37/
Less than 15 to 30 30 to 45 45 minutes More than Not 15 minutes minutes to 1 hour 1 hour Applica	hla
G_1 G_2 G_3 G_4 G_5 G_6	NIC

The next questions ask about things that may have happened to you or someone who lives with you.

12) Please tell me if any of the following things have happened to you or anyone who lives with you in the past 6 months:

A) Was anyone's purse, wallet, or jewelry snatched from them?	G₁ YES	G ₂ NO	38/
B) Was anyone threatened with a knife or gun?	G ₁ YES	G_2 NO	39/
C) Was anyone beaten or assaulted?	G ₁ YES	G ₂ NO	40/
D) Was anyone stabbed or shot?	G ₁ YES	G ₂ NO	41/
E) Did anyone try to break into your home?	G₁ YES	G_2 NO	42/

T he	SECTION III: N	leighbors					
	xt questions ask y	ou about your	neighbors.				_
1)	How often do you		a neighbor?				4
	Almost every day	Once a week	Once a month	A few tim	es a year	Almost never	
	G_1	G_2	G_3	G	Ξ_4	G_5	
2)	How often do you		from a neighb	or?			4
	Almost every day	Once a week	Once a month	A few tim	es a year	Almost never	
	G_1	G_2	G_3	G	$\frac{3}{4}$	G_5	
3)	How often do you	ı watch a neigh	bor's child?				4
	Almost every day	Once a week	Once a month	A few time	es a year	Almost never	
	G_1	G_2	G_3	G	S_4	G_5	
4)	How often do you	ı have coffee or	a meal with a	neighbor?			2
	Almost every day	Once a week	Once a month	A few tim	es a year	Almost never	
G_5	G_1	G_2	G_3	G	$\frac{3}{4}$		
5)	How often do you	stop to chat w	ith a neighbor	in the stree	t or hallwa	y?	2
	Almost every day	Once a week	Once a month	A few tim	es a year	Almost never	
	G_1	G_2	G_3	G	$\frac{3}{4}$	G_5	
6)	How many of you	ır friends live in	the same neig	hborhood a	s you?		4
	None	A few	Many				
	G_0	G_1	G_2				
7)	How many of you	ır family membe	ers live in the s	ame neighb	orhood as	you?	4
	None	A few	Many				
	G_0	G_1	G_2				
-	If you saw a neig I your neighbor ab	_	ting into troubl	e, how likel	y is it that	you would	ţ
	Very likel	y Somewhat	t likely Not	Very likely	Not at al	likely	
	${\sf G_1}$	G_2	-	G_3	G_4	•	
	If a neighbor saw I <u>you</u> about it?	your child gett	ing into trouble	e, how likely	is it that t	hey would	:
	Very likel	y Somewhat	t likely Not	Very likely	Not at al	likely	
	G.	G	-	G.	G.	•	

10) If you needed help getting food, who would you go to <u>first</u> for help? Would you go to... [CHECK ONE]

52-53/

- G₁ A family member
- G₂ A friend
- G₃ A neighbor
- G₄ Your church
- G₅ A foodbank or soup kitchen
- G₆ A government agency
- G₇ Somewhere else
- G₈ Nowhere

11) If you were <u>sick and unable to take care of yourself</u>, who would you go to <u>first</u> for help? Would you go to... [CHECK ONE]

54-55/

- G₁ A family member
- G₂ A friend
- G₃ A neighbor
- G₄ Your church
- G₅ A social service agency
- G₆ A government agency
- G₇ Somewhere else
- G₈ Nowhere

12) If you <u>needed money for an emergency</u>, who would you go to <u>first</u> for help? Would you go to... [CHECK ONE]

- G₁ A family member
- G₂ A friend
- G₃ A neighbor
- G₄ Your church
- G₅ A bank
- G₆ A government agency
- G₇ Somewhere else
- G₈ Nowhere

13) If you <u>had a serious personal problem</u>, who would you go to <u>first</u> for help? Would you go to... [CHECK ONE]

58-59/

- G₁ A family member
- G₂ A friend
- G₃ A neighbor
- G₄ Your church
- ${\rm G}_{\rm 5}\,$ A social service agency or counseling center
- G₆ A government agency
- G₇ Somewhere else
- G₈ Nowhere

34-35/

R D 19- 22/ 000	SECTION IV - EMPLO	YMENT TRAINING AND E	XPERIENCE	
3	next set of questions	asks about your wor	k experiences.	
	re you in a job traini ng, carpentry, busine		ke a program that teaches typing, o	cosmetology,
	G_2 I am enrolled (What kind? G_3 I am not in a			
2) Du	uring most of last we	ek, were you [CHEC	K ONE]	24/
	G_1 Working for p G_2 Looking for w G_3 Keeping hous	=	 G₄ Attending school G₅ Doing something else G₆ Working for benefits 	
-	Oo you have any si ecleaning, cooking a	-	n extra money like babysitting, hand things like that?	-
	G_1 YES G_2 NO			25/
-	•	_	fits), please answer the next question, check the box "I am not working	
4) W	hat kind of work do y	ou do?		26-27/
				
			${ m G_{99}}$ I AM NOT WOF	RKING
5) Ho	w long have you bee	n doing this job? _ WEEKS		28-29/
	OR 	_ MONTHS		30-31/
	OR	YFARS		32-33/

 G_{99} I AM NOT WORKING

6)	How much d	lo you usually earn an hour?	\$	<u>, /HOUR</u> 36-40/		
			G _{og} I AM	1 NOT WORKING 41-42/		
			00	I AM WORKING FOR BENEFITS		
7)	How many h	ours do you usually work in a v	veek? _	/HOURS 43-44/		
				G ₉₉ I AM NOT WORKING _{45/46/}		
8)	How many m	nonths did you work at this job	last year?	/MONTHS 47-48/		
				G_{99} I AM NOT WORKING _{49-50/}		
9)	How did you	first hear about your job? [CHE	CK ONE]	51-52/		
	C	From a neighbor				
	${ m G_1} \ { m G_2}$	From a friend or associate				
	G_2 G_3	From a family member				
	G_3	From a want ad in the newspar	er			
	G_5	From an employment agency				
	G_6	From the welfare office				
	G_7	From somewhere else (specify))			
	G_{99}	I AM NOT WORKING				
10) How do you	u get to work? [CHECK ONE]		53-54/		
	$G_{\scriptscriptstyle{1}}$	Bus or other public transportation	on			
	$G_2^{'}$	My own car				
	G_3	Cab				
	G_4	Borrowed car				
	${\sf G_5}$	Walk				
	G_6	I work at home				
	G_7	Ride with a friend (carpool)				
	G_8	Other (specify)				
	G_{99}	I AM NOT WORKING				
11) How long d	loes it take you to get to work?	[CHECK ONE	55-56/		
	$\mathrm{G}_{\scriptscriptstyle{1}}$	Less than 15 minutes				
	G_2	15 to 30 minutes				
	G_3	30 to 45 minutes				
	G_4	45 minutes to one hour				
	G_5	More than one hour				
	G_6	I work at home				
	G_{99}	I AM NOT WORKING				

The next set of questions asks about any jobs you may have had in the past. If you have never worked for pay, check the box for "I have never worked for pay."

12)	Have you ever worked for pay? [CHECK ONE]			57/
	G_1 I am working now for pay G_2 I have worked for pay, but I am r G_3 I have never worked for pay	not working nov	ı	
13)	When did you last work for pay?	(YEA	₹)	58-59/
14)	$\begin{array}{ccc} G_{97} & \text{I AM WORKING NOW I} \\ G_{99} & \text{I HAVE NEVER WORK} \\ \end{array}$ What type of work did you do at your previous	ED FOR PAY		60/B
1-7,	Trinactype of Work and you do at your provious	o paying job.		61-62/
	G ₉₉ I HAVE Note that the set of questions asks about looking for a paying work? [CHECK G ₁ I am working now, but looking for G ₂ I am not working now, but I am looking G ₃ I am not looking for work G ₄ No, I am working now	CK ONE] r a different job		63/
16)	What kinds of things have you done to look	for work in th	e past 6 months? Have y	ou?
	A) Looked in the newspaper?	G ₁ YES	G ₂ NO	64/
	B) Gone on interviews?	G ₁ YES	G_2 NO	65/
	C) Gone to an employment agency?	·	=	66/
	D) Talked to friends?	G₁ YES	G_2 NO	67/
	E) Other things?		G ₁ YES	
	G_2 NO			68/

The next set of questions asks about your transportation.

17) Do you have a valid drivers license?

69/

 G_1 YES G_2 NO

18) Do you have a car that runs?

70/

 G_1 YES G_2 NO

71-80/B

R D **SECTION V - BENEFITS** The next set of questions asks about your experiences with welfare. 1) Did you ever get AFDC (welfare) for your own children? 23/ YES G_2 NO 2) Are you getting AFDC (welfare) now? 24/ G₁ YES NO G_2 3) When did you first begin to get AFDC for your own children? 25-28/ Year: _ Do not remember G_{qg} I HAVE NEVER GOTTEN AFDC 4) When was the last time you applied for AFDC (welfare)? We do not mean the last time you were recertified. 29-32/ Year: G_{qg} Do not remember G_{qq} I HAVE NEVER GOTTEN AFDC 5) Did your mother ever get AFDC or welfare when you were growing up? 33-34/ G₁ YES G_2 NO Don't know 6) Did you live with both of your parents until you were 16? 35/ G₁ YES G_2 NO

44/

7)	Do y	you	now	get	any	of the	following	benefits?
----	------	-----	-----	-----	-----	--------	-----------	-----------

A) Food Stamps?	G₁ YES	G_2 NO	36/
B) SSI (Supplemental Security Income)?	G ₁ YES	G_2 NO	37/
C) Child support?	G ₁ YES	G_2 NO	38/
D) Medicaid?	G ₁ YES	G_2 NO	39/
E) Education assistance (financial aid)?	G ₁ YES	G_2 NO	40/
F) WIC?	G ₁ YES	G_2 NO	41/
G) Unemployment Compensation?	G ₁ YES	G_2 NO	42/
H) Social Security Disability or Survivor's Benefits?	G ₁ YES	G_2 NO	43/

8) Is there anyone living with you who has a health problem or mental problem that keeps him/her from doing normal activities like walking, getting dressed, housework, or working? If yes, who is it?

G₁ NO

G₂ YES

Person 1:			
	First	Middle	Last Name
Person 2:			
	First	Middle	Last Name
Person 3:			
	First	Middle	Last Name

SECTION VI: OUTLOOK

next questions ask you about how sure you feel about dealing with situations that may come up if you move to a new neighborhood.

1) How sur	-	t you will be able	to find an apartr	ment in a different	area of Anytown? A	re
•	•	airly sure	50-50	Not very sure	Not at all sure	
(G_1	G_2	G_3	G_4	G_5	
-	re are you th	at you would like	e living in a neig	ghborhood you've	e never lived in befor	e?
Are you	, ouro ==	Coirly ouro	50-50	Not very our	Not at all ours	46/
•		airly sure		Not very sure	Not at all sure	
(\overline{G}_1	G_2	G_3	G_4	G_5	
3) How su	ire are you th	nat you would be	able to get alor	ng with your neig	hbors after you mov	e?
•	/ sure F	airly sure	50-50	Not very sure	Not at all sure	47/
•	G_1	G_2	G_3	G ₄	G ₅	
4) How sur	-	t you would like li	ving in a neighb	orhood with peop	ole who earn more th	an
•	•	airly sure	50-50	Not very sure	Not at all sure	,
(\mathfrak{F}_1	G_2	G_3	G_4	G_5	
5) How su	re are you th	at you will have a	a job after you r	nove? Are you		49/
Very	/ sure F	airly sure	50-50	Not very sure	Not at all sure	
(\bar{G}_1	G_2	G_3	G_4	G_5	
-	-	at you could kee	p your children	from hanging are	ound with kids who g	jet
	•	airly sure	50-50	Not very sure	Not at all sure	
(3 ₁	\overline{G}_2	G_3	${ m G_4}$	G_{5}	

51/

52/

SECTION VII: SCHOOL

he last set of questions asks you about your involvement with your children's schooling.

1) In the <u>past 12 months</u>, have you or another adult who lives with you gone to a general meeting at your child(ren)'s school or pre-school, like a back-to-school night or parent/teacher organization meeting?

G₁ YES

G₂ NC

G₃ I have no children in school

2) In the <u>past 12 months</u>, have you or another adult who lives with you gone to a school or class event like a play, sports event, or science fair?

G₁ YES

G₂ NO

G₃ I have no children in school

3) In the <u>past 12 months</u>, have you or another adult who lives with you been a volunteer at your child(ren)'s school or been on a school committee?

53/

G, YES

G₂ NO

G₃ I have no children in school

4) In the <u>past 12 months</u>, have you or another adult who lives with you worked with a youth group, sports team, or club outside of school?

G₁ YES

G₂ NO

G₃ I have no children in school

55-80/B

	_	_
SECTION VIII:	CONTACT	INITODRA A TION
SECTION VIII.	CONTACT	INFORWATION

Because this is a new program, it is <u>very important</u> that we talk to people a few times during the next few years to see how things are going. Please give us the names, addresses, and telephone numbers for THREE friends or relatives who do not live with you and who will always know how to contact you. Please list people who live at <u>different</u> addresses. Your answers will be kept private.

<u>Name:</u>	<u>Address:</u>	<u>Telephone Number:</u>
First Middle Last Relationship to you:	Street: Apt: City: State: ZIP Code:	() -
First Middle Last Relationship to you:	Street: Apt: City: State: ZIP Code:_	() -
First Middle Last Relationship to you:	Street: Apt: City: State: ZIP Code:	() -

Form Approved: OMB No. 2528-161

Exp. Date: 6/97

Name	MOVING TO OPPORTUNITY BASELINE SURVEY: PART II - HOUSEHOLD INFORMATION
	Social Security Number:

Household Members

Please provide the following information about yourself and all other people who live with you now. Do not include people who are only in your home temporarily. List yourself on Line 1.

A. Last Name	B. First Name	C. Middle Name	D. Birth Date	E. Sex	F. Race	G. Ethnicity
1. (SELF) CARD 19-22/HI01			MONTH DAY YEAR 23-28/	$G_{\scriptscriptstyle 1}$ male $G_{\scriptscriptstyle 2}$ female	$\begin{array}{c} G_{_1} \text{ AFRICAN-AMERICAN} \\ G_{_2} \text{ WHITE} \\ G_{_3} \text{ AMER. INDIAN} \\ G_{_4} \text{ ASIAN/PACIFIC ISLANDER} \\ G_{_5} \text{ OTHER} \end{array}$	$G_{_1}$ HISPANIC $G_{_2}$ NOT HISPANIC
2. CARD 19-22/HI02			MONTH DAY YEAR 23-28/	$G_{\scriptscriptstyle 1}$ male $G_{\scriptscriptstyle 2}$ female	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & & 31/\\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & & & 32-80/B \end{array}$
3. CARD 19-22/HI03			MONTH DAY YEAR 23-28/	$G_{\scriptscriptstyle 1}$ male $G_{\scriptscriptstyle 2}$ female	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & & 31/\\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & & & 32-80/8 \end{array}$
4. CARD 19-22/HI04			MONTH DAY YEAR 23-28/	$G_{\scriptscriptstyle 1}$ male $G_{\scriptscriptstyle 2}$ female	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & & 31/\\ G_{_1} \text{ HISPANIC} \\ G_{_2} \text{ NOT HISPANIC} \\ & & & 32\text{-80/B} \end{array}$
5. CARD 19-22/HI05			MONTH DAY YEAR 23-28/	$\begin{tabular}{ll} G_1 & MALE \\ G_2 & FEMALE \\ \end{tabular}$	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & & 31/\\ G_1 & \text{HISPANIC} \\ G_2 & \text{NOT HISPANIC} \\ & & & 32-80/B \end{array}$
6.					G₁ AFRICAN-AMERICAN	31/

A. Last Name	B. First Name	C. Middle Name	D. Birth Date	E. Sex	F. Race	G. Ethnicity
7. CARD 19-22/HI07			MONTH DAY YEAR	$$G_{\scriptscriptstyle 1}$$ male $$G_{\scriptscriptstyle 2}$$ female $^{\scriptscriptstyle 29'}$	$\begin{array}{c} G_{_1} \text{ AFRICAN-AMERICAN} \\ G_{_2} \text{ WHITE} \\ G_{_3} \text{ AMER. INDIAN} \\ G_{_4} \text{ ASIAN/PACIFIC ISLANDER} \\ G_{_5} \text{ OTHER} \end{array}$	$\begin{array}{c} & & \\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & & \\$
8. CARD 19-22/HI08			MONTH DAY YEAR 23-28/	${\rm G_1}$ male ${\rm G_2}$ female $^{29\prime}$	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	G ₁ HISPANIC G ₂ NOT HISPANIC 32-80/B
9. CARD 19-22/Hi09			MONTH DAY YEAR 23-28/	$\ensuremath{G_{\scriptscriptstyle{1}}}$ male $\ensuremath{G_{\scriptscriptstyle{2}}}$ female $^{29\prime}$	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & & & \\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$
10. CARD 19-22/HI10			MONTH DAY YEAR	$\ensuremath{G_{_1}}$ male $\ensuremath{G_{_2}}$ female $$^{29\prime}$$	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & 31/\\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & 32-80/B \end{array}$
11. CARD 19-22/HI11			MONTH DAY YEAR	$\ensuremath{G_{_1}}$ male $\ensuremath{G_{_2}}$ female $$^{29\prime}$$	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & 31/\\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & 32-80/B \end{array}$
12. CARD 19-22/HI12			MONTH DAY YEAR	$\begin{tabular}{ll} G_1 & male \\ G_2 & female \\ \end{tabular}$	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & 31/\\ G_1 \text{ HISPANIC} \\ G_2 \text{ NOT HISPANIC} \\ & 32-80/B \end{array}$
13. CARD 19-22/Hi13			MONTH DAY YEAR 23-28/	$G_{\scriptscriptstyle 1}$ male $G_{\scriptscriptstyle 2}$ female	$\begin{array}{c} G_1 \text{ AFRICAN-AMERICAN} \\ G_2 \text{ WHITE} \\ G_3 \text{ AMER. INDIAN} \\ G_4 \text{ ASIAN/PACIFIC ISLANDER} \\ G_5 \text{ OTHER} \end{array}$	$\begin{array}{c} & 31/\\ G_1 \text{ HISPANIC}\\ G_2 \text{ NOT HISPANIC} \\ & 32-80/B \end{array}$

	Adult Information Form
Name	Social Security Number:

Please provide the following information about yourself and other adults (18 & older) who live with you now. Do not include children under 18 or adults who are only staying in your home temporarily. List yourself on line 1.

A. Last Name	B. First Name	C. Relationship to You	D. Is this Person Now in School?	E. Graduated from High School or GED?	F. Now Working Full or Part Time?	G. Marital Status	H. Number of Children	I. Year 1st Child was Born
1. CARD 19-22/AI01		SELF 23-24/	G_1 YES G_2 NO		G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
2. CARD 19-22/AI02		23-24/	G_1 YES G_2 NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G ₃ NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
3. CARD 19-22/AI03		23-24/	G ₁ YES G ₂ NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
4. CARD 19-22/AI04		23-24/	G ₁ YES G ₂ NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
5.			G_1 YES G_2 NO	$egin{array}{l} G_1 & \text{GED} \\ G_2 & \text{HIGH SCHOOL} \end{array}$	${ m G_1}$ full-time ${ m G_2}$ part-time	$egin{array}{l} G_1 & \text{NEVER MARRIED} \\ G_2 & \text{MARRIED} \end{array}$		

	A. Last Name	B. First Name	C. Relationship to You	D. Is this Person Now in School?	E. Graduated from High School or GED?	F. Now Working Full or Part Time?	G. Marital Status	H. Number of Children	I. Year 1st Child was Born
6.	CARD 19-22/Al06		23-24/	${\sf G}_2^{\cdot}$ no	G ₁ GED G ₂ HIGH SCHOOL G ₈ NEITHER	G ₁ FULL-TIME G ₂ PART-TIME G ₃ NOT WORKING	$\begin{array}{ll} G_1 & \text{NEVER MARRIED} \\ G_2 & \text{MARRIED} \\ G_3 & \text{SEPARATED} \\ G_4 & \text{DIVORCED} \\ G_5 & \text{WIDOWED} \end{array}$	29-30/	31-34 35-80/E
7.	CARD 19-22/AI07		23-24/	G_1 YES G_2 NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
8.	CARD 19-22/AI08		23-24/	G ₁ YES G ₂ NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
9.	CARD 19-22/AI09		23-24/	G_1 YES G_2 NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	G ₁ NEVER MARRIED G ₂ MARRIED G ₃ SEPARATED G ₄ DIVORCED G ₅ WIDOWED	29-30/	31-34 35-80/E
10.	CARD 19-22/Al10		23-24/	G_1 YES G_2 NO	G_1 GED G_2 HIGH SCHOOL G_8 NEITHER	G_1 FULL-TIME G_2 PART-TIME G_3 NOT WORKING	$\begin{array}{c} G_1 \text{ NEVER MARRIED} \\ G_2 \text{ MARRIED} \\ G_3 \text{ SEPARATED} \\ G_4 \text{ DIVORCED} \\ G_5 \text{ WIDOWED} \end{array}$	29-30/	31-34 35-80/E

23-24/

CARD 19-22/C101 **CHILD INFORMATION FORMS CHILDREN AGES 6 TO 17** Please fill out one form for each child who lives with you now and is between 6 and 17 years old. Your name: _____ Middle First Last Your Social Security Number: ___ - __ - __ - __ _ _ _ _ _

Number of children ages 6 to 17 in household:

1) CHILD's Name:							
First Last							
2) What is this CHILD's relationship to you?	G ₁ Birth child	G ₃ Grandchi	ld			G ₅ Other	relative _{25/}
[CHECK ONE] G ₂ Ad	opted child	G₄ Foster ch	nild	G ₆ Not a	relative		
3) Is this CHILD now in school? G ₁ YES	G ₂ NO						26/
4) What is the name of this CHILD's <u>current</u> scho	ool?						27-30/
	Please c	heck one:		ementary gh School	G Junior high o	r middle	
5) What grade did this CHILD complete last year	? G ₁ Kindergarten	G ₄ Grade 3	G ₇ Gı	rade 6	G ₁₀ Grade 9	G ₁₃ Grade 12	31-32
[CHECK ONE]	G ₂ Grade 1	G₅ Grade 4	G ₈ Gι	rade 7	G ₁₁ Grade 10	G ₁₄ Not graded	
	G ₃ Grade 2	G ₆ Grade 5	G ₉ Gı	rade 8	G ₁₂ Grade 11	G ₁₅ Not in school la	st year
6) Does this CHILD go to a special class for gifte	ed students or do ad	vanced work i	n any su	ıbjects?			
G_1 YES G_2 NO G_{98} Don't I	know						33-34/
7) During the past <u>two years</u> , has this CHILD go	ne to a special class	or school or g	otten sp	pecial help	in school for		
A) Learning problems	G₁ YES		G ₂ NO	G ₉₈ Don'	't know		35-36/
B) Behavioral or emotional problems	G₁ YES		G ₂ NO	G ₉₈ Don'	't know		37-38/
8) Does this CHILD have any physical, emotions	al, or mental problen	ns that					
A) Means this CHILD needs special medic	ine or equipment?			G ₁ YES	G ₂ NO		39/
B) Makes it hard for this CHILD to get to so	hool?			G ₁ YES	G ₂ NO		40/
C) Makes it hard for this CHILD to play acti	ve games or sports?			G₁ YES	G_2 NO		41/

Form Approved: OMB No. 2528-161

Exp. Date: 6/97

46/

47-48/

49/

 G_1 YES G_2 NO G_{98} Don't know

10) During the past two years, has anyone from this CHILD's school asked someone to come in and talk about problems this CHILD was having with schoolwork or behavior?

 G_1 YES G_2 NO G_{98} Don't know

11) Where does this CHILD usually go after school? [CHECK ONE]

G₁ Home, supervised G₃ Somewhere else, supervised

G₂ Home, unsupervised G₄ Somewhere else, unsupervised

12) If this CHILD is supervised after school, who supervises this CHILD? [CHECK ONE]

G₁ This CHILD's mother G₈ Leave this CHILD alone

 G_2 This CHILD's father G_9 Hired babysitter who is not a relative

 G_3 This CHILD's brother or sister G_{10} Day care center

G₄ This CHILD's grandparents G₁₁ This CHILD is in a school extended-day program

 G_5 Other relative of this CHILD G_{12} This CHILD is in after-school activities or sports

 G_6 A friend of yours G_{13} This CHILD works after school

 G_7 Trade with neighbor G_{99} This CHILD is not supervised after school

13) Where is this CHILD usually in the evenings? [CHECK ONE]

G₁ Home, supervised

G₂ Home, unsupervised

Children	in	Household	Aaes	6 to	18.	continued
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- G₃ Somewhere else, supervised
- G₄ Somewhere else, unsupervised

14) If this CHILD is supervised in the evenings, who supervises this CHILD? [CHECK ONE]

50-51/

- G₁ This CHILD's mother G₈ Leave this CHILD alone
- G₂ This CHILD's father G₉ Hired babysitter who is not a relative
- G_3 This CHILD's brother or sister G_{10} Day care center
- G_4 This CHILD's grandparents G_{11} This CHILD is in school activities or sports
- G_5 Other relative of this CHILD G_{12} This CHILD works at night (supervised job)
- G_6 A friend of yours G_{99} This CHILD is not supervised in the evening
- G₇ Trade with neighbor 52-80/B

CARD 19-22/C201

CHILD INFORMATION FORMS

CHILDREN AGES 5 AND YOUNGER

Please fill out one form for each child who lives with you now and is 5 years old or younger.

Your name:				
	First	Middle	Last	
Your Social Sec	urity Number:			
Number of child	ren ages 5 or younger in ho	usehold:		23

40-41/

42/

1) CHILD's Name:						
First	Last					
2) What is this CHILD's relationship to yo	ou? G ₁ Birth child	G ₃ Grar	ndchild			G ₅ Other relative _{25/}
[CHECK ONE]	G ₂ Adopted child	G ₄ Foster child	G ₆ Not a re	elative		
3) How much did this CHILD weigh when		Pounds,		Oon't know		
4) Was this CHILD ever in the hospital be	fore his/her first birthd	ay because this CH	ILD was sick o	or injured?		
G_1 YES G_2 NO	G ₉₈ Don't know					32-33/
5) Does this CHILD have any physical, en	notional, or mental prob	olems that				
A) Means this CHILD needs special medicin	ne or equipment?		G ₁ YES	G ₂ NO	G ₉₈ Don't know	34-35/
B) Makes it hard for this CHILD to go to pre	e-school or school or child	d care?	G ₁ YES	G_2 NO	G ₉₈ Don't know	36-37/
C) Makes it hard for this CHILD to play active	ve games or sports?		G₁ YES	G_2 NO	G ₉₈ Don't know	38-39/
6) Is this CHILD now in a pre-school prog	ıram (like Head Start or	nursery school) or	in a full-day o	r half-day kind	lergarten?	

7) Is this CHILD in any other kind of child care program, or is he/she being cared for by a regular babysitter while you are working, looking for work, in school, or in job training?

 G_1 YES G_2 NO

G₂ NO

G₉₈ Don't know

G₁ YES

49-50/

8) What types of child care do you use for this CHILD?

A) I DO NOT USE CHILD CARE		G ₁ YES	G_2 NO	43/
B) Head Start day care center or school kin	ndergarten	G₁ YES	G_2 NO	44/
C) Day care or group care center other that	n Head Start	G₁ YES	G ₂ NO	45/
D) Babysitter who is a relative (grandparen	ts, sister or brother)	G₁ YES	G_2 NO	46/
E) Babysitter who is not a relative		G₁ YES	G_2 NO	47/
F) Other		G₁ YES	G_2 NO	48/

9) When you go out (for example, to go shopping or to visit a friend), who most often takes care of this CHILD? [CHECK ONE]

- G₁ CHILD's father
- G₂ CHILD's brother or sister
- G₃ CHILD's grandparents
- G₄ Other relative of CHILD
- G₅ A friend of yours
- G₆ Trade with neighbor
- G₇ Leave CHILD alone
- G₈ Hired babysitter who is not a relative
- G₉ Day care center
- G₁₀ Other
- G₁₁ I usually take CHILD with me
- G₁₂ CHILD is in school or an after-school program

57-80/B

10) How often do you or someone in your home have a chance to... [CHECK ONE]

A) Take CHILD on an outing to a park or out shopping	G₁ Every day	G ₂ About once a week	G ₃ About once a month	G ₄ Almost never	51/
B) Take CHILD to church for a service or Sunday School	G₁ Every day	G ₂ About once a week	G ₃ About once a month	G ₄ Almost never	52/
C) Take CHILD to visit with friends and relatives	G₁ Every day	G ₂ About once a week	G ₃ About once a month	G ₄ Almost never	53/
D) Play blocks or dolls, do a puzzle, or play a game					
with CHILD	G₁ Every day	G ₂ About once a week	G ₃ About once a month	G ₄ Almost never	54/

11) How often do you or someone in your home have a chance to...

A) Read a book or story to CHILD	G ₁ More than	G ₂ About once	G ₃ About once	G ₄ About once	G ₅ Almost	55/
	once a day	a day	a week	a month	never	
B) Watch Sesame Street or other						
educational programs with CHILD	$\mathrm{G_1}$ More than	G ₂ About once	G ₃ About once	G ₄ About once	G ₅ Almost	56/
	once a day	a day	a week	a month	never	

Prepared by Abt Associates

Appendix C More Complex Sampling Techniques

Appendix C More Complex Sampling Techniques

This section contains information on more complex sampling techniques than those presented in Chapter 4. Specifically, issues such as stratified and cluster samples, the probability proportionate to size method, panel surveys, and sampling weights are here discussed.

C.1 Stratified Samples

Because they involve dividing the resident population into groups, stratified samples are only appropriate for large PHAs with a variety of types of housing. Smaller PHAs will not likely have enough residents in each category to make meaningful comparisons across groups. However, larger PHAs may want to make comparisons among residents in different types of housing (e.g., senior housing, family housing, or scattered site housing) and so may want to choose to use what are called *stratified sampling* methods. Stratification is defined as the "classification of the populations into subpopulations, or strata, based on some supplementary information, and then the selection of separate samples from each stratum." For example, in the CHA survey, the sample was divided into three groups: family low-rise residents, family high-rise residents, and senior housing residents.

The benefit of stratification is that the sample size of each stratum is controlled by the sampler. *Stratified sampling may be used with all forms of data collection—self-administered, telephone, and face-to-face surveys.* In order to stratify a sample, you must be able to divide the sample into the designated group or stratum and sample separately from each. Stratified samples may be either proportionate or disproportionate.

With *proportionate stratified samples*, the size of each stratum is proportionate to the size of that characteristic in the population. For example, you may want to stratify by household size; you know that the breakdown of the housing authority's units is as follows: 10 percent of the units have one household member, 65 percent have two to three members, and 25 percent have four or more members. If you then know that you want a total sample size of 300, divide the population into the three groups, or strata, and use simple random sampling to sample 30 one-member households (300 x .10), 195 two- to three-member households (300 x .65), and 75 four- or more-member households (see Exhibit C-1). However, proportionate stratified sampling ensures that you will get a sample with the same proportion of each stratified group as in the population. It results in more precise estimates than simple random sampling, but it takes a little more inormation and effort prior to data collection.

¹ Kalton, Graham. 1983. Introduction to Survey Sampling, Sage University Paper series on Quantitative Applications in the Social Sciences, series no. 07-035. Beverly Hills, New Delhi and London: Sage Publications, p.19.

Exhibit C-1 Stratified Sampling

	Proportionate Stratified Sample		Disproportionate Stratified Sample	
Number of Household Members	Percent of Population	Sample Size	Percent of Population	Sample Size
One	10	30	10	100
Two to Three	65	195	65	100
Four or More	25	75	25	100

Disproportionate stratified samples are more commonly used than proportionate stratified samples. A disproportionate stratified sample is necessary when a proportionate stratified sample will not yield a large enough sample size in any given stratum or when the goal of the survey is to make comparisons across strata and not to provide population estimates.

In the above example, proportionate stratified sampling would only yield a sample size of 30 for the one-member households, which would be too small to use for analysis (generally, you need a sample size of at least 50 for analysis). Therefore, assuming a population estimate was not the goal of the survey, the sample could be stratified with equal sample sizes per stratum. The results could then be adjusted at the analysis stage using sampling weights (see Section C.5) so that you will be able to say something about the entire population. Disproportionate stratified samples may be a useful tool if you want to make comparisons across developments or types of households, as in the example above. For this reason, most large PHAs that want to stratify their survey samples will likely want to use this approach.

C.2 Cluster Samples

Cluster sampling is used primarily for in-person surveys. Due to financial constraints, survey researchers are increasingly incorporating cluster samples into the survey sampling design. Cluster sampling produces geographically dense samples, and therefore reduces the interviewer travel costs necessary to administer the survey. Similar to stratified sampling, in cluster sampling, the population is divided into a number of clusters or small groups—the smaller the cluster the better. For PHAs, these clusters might be housing developments. Then using simple random, or systematic, sampling (if the clusters are all of the same size) or probability proportionate to size (see below) sampling (if the clusters are of varying sizes), the clusters themselves are sampled and may be randomly selected. Finally, you either conduct a

census of every unit in the selected cluster or you conduct a second stage of sampling to sample units within the clusters. The second stage might involve randomly selecting buildings or housing units within the development.

The biggest advantage to cluster sampling is the cost savings it achieves. It is more cost effective for both the data collection (for face-to-face surveys only) and for the sampling itself because you do not have to list every unit within the PHA and sample randomly from that list. However, using cluster sampling means that some of your survey precision is lost. Unless the cost savings of cluster sampling allows you to increase the sample size enough to offset this loss in precision, you probably do not want to use cluster sampling.

C.3 Probability Proportionate to Size

Because clusters are often not equal in size, it may be necessary to incorporate sampling methods that use *probability proportionate to size* (PPS) selection. PPS sampling means that the larger clusters have a higher probability of being selected.

To illustrate, assume that your housing authority contains ten housing developments, each of which contains a different number of housing units (see Exhibit C-2). In order to randomly select four developments using PPS sampling, you would list the developments and their cumulative sample size (i.e., the total number of units in all developments). In this example, the cumulative sampling size is 581, and the sampling interval is therefore 145 (a sample size of 581 divided by four, the number of desired clusters). Using a random starting point (in this example, the number 37 was selected off a random numbers table), you will select every 145th unit looping through the sample. Therefore, the first unit you select is 37 + 145 = 182, the second unit is 327, the third unit is 472, and the fourth unit is 617—since there are only 581 pieces of sample, the fourth unit loops back to the beginning and unit 36 is selected instead. Consequently, the four developments that contain those units—Ali, Dunston, Favre, and Harding—are selected for the sample. You may opt to select every unit within those four developments for your sample or conduct another stage of sampling at this point.

Exhibit C-2
Probability Proportionate to Size Sampling

Development Name	Number of Units	Cumulative Population Size	Selected Sample
Ali	70	70	√ (36)
Barkley	52	122	
Carey	40	162	
Dunston	111	273	√ (182)
Ellway	27	300	
Favre	60	360	√ (327)
Graf	59	419	
Harding	82	501	√ (472)
Ingram	25	526	
Jordan	55	581	

C.4 Panel Surveys

The sampling methods proposed have all assumed that you will be conducting a *cross-sectional survey*, which is defined as one round of data collection at one point in time. In some cases, it may be preferable to conduct a *panel survey*. A panel survey is defined as a survey that is conducted at two or more points in time with the same residents.

The advantage of a panel survey is that it allows you to track changes in individual attitudes, perceptions, and behaviors over time. However, if you are only interested in net change, for example changes in community attitudes, perceptions, and behaviors over time, multiple cross-sectional surveys (also known as a *longitudinal survey*) may be adequate.

The disadvantages of panel surveys are as follows:

• *Respondent mobility*. With a panel survey, you need to be able to locate each respondent, when you conduct subsequent rounds of interviews. Due to the mobility of the population, considerable tracking may be necessary. Collecting

- substantial information such as date of birth, emergency contact names, etc. during the first wave of interviewing can assist in this effort.
- *Increased costs*. The efforts that are necessary to track the respondents in a panel can significantly increase the cost of administering the survey. Further, if respondents have moved and they are still eligible for the study, interviewer travel costs may also increase.
- *Quality of data.* Repeatedly interviewing the same respondents can adversely affect the quality of the data in several ways: (a) the respondent may feel overburdened and eventually refuse to participate in the survey, therefore reducing the response rate and the representativeness of the data; or (b) the respondent may remember his/her answers from previous waves and try to be consistent or alter his/her responses as a result.

C.5 Sampling Weights

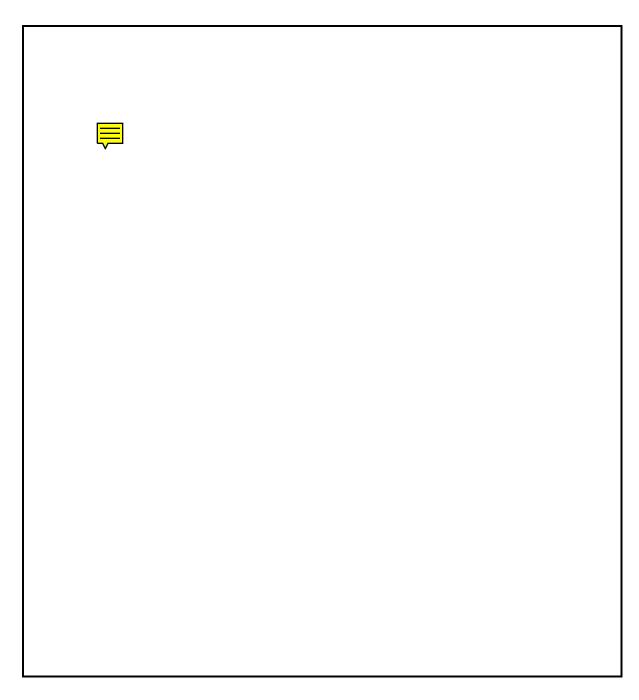
Sampling weights can be used in the analysis stage to adjust the relative importance of the responses to more adequately represent the population from which the sample was drawn. Sampling weights are necessary if every element in the population did not have an equal probability of selection. For instance, if you use disproportionate stratified sampling methods, then your final sample will not reflect the general make-up of the population—one or more groups are over represented.

In the example provided in Exhibit C-1, where 100 respondents each were surveyed from one-member, two- to three-member, and four- or more-member households, the sample as a whole does not reflect the breakdown within the population. In order to account for the overrepresentation of the one-member and four- or more-member households, and the underrepresentation of the two- to three-member households in the analysis, the responses are weighted accordingly and adjusted back to the population rates.

As with the sample design issues, weighting a sample should be done in consultation with a sampling statistician or someone familiar with the process and methods.

Appendix D Example of a Random Numbers Table

Appendix D Example of a Random Numbers Table



From, *How to Conduct Victimization Surveys: A Workbook*, by L. Piper, R. Lucas, J. Shirely, and William Rohe. Washington, D.C.: U.S. Department of Housing and Urban Development. 1997.