Introduction to Surveys

For the purpose of the Community Profile, surveys are a good data collection method when looking to (1) gather information from providers and/or the community about service delivery gaps, needs and barriers; (2) support, expand, or better understand statistical or community data you already have; (3) gather information from providers and/or the community on behaviors, beliefs or attitudes; and/or (4) determine the level of knowledge that providers and/or the community has on a particular issue. Utilizing a survey allows the Community Profile Team to tailor questions to the target community(ies) being assessed and gather information that highlights specific issues. The data collected has the potential to set the groundwork for more in-depth follow-up through the use of key informant interviews and focus groups.

For the purpose of the Community Profile, surveys should be used to:
- Gather information from providers and/or residents about service delivery gaps, needs and barriers
- Support, expand, or better understand statistical or community( data you already have
- Gather information from providers and/or residents on behaviors, beliefs or attitudes
- Determine the level of knowledge that providers and/or residents have on a particular issue

Surveys can capture two types of data:
- Quantitative data is collected using closed-ended questions to collect information that can be displayed as numbers and presented as statistical data (e.g. percentages, averages). Closed-ended questions require a participant to choose from a set of pre-determined answers.
- Qualitative data is collected using open-ended survey questions to gather information on service delivery gaps/needs/barriers, behaviors, beliefs, or attitudes. Open-ended questions allow the participant to write-in their answers to the questions. There are no pre-determined answers.

Examples of Quantitative Closed-Ended Questions:
- Please select one of the choices below that represents your current age: 39 years of age and younger, 40-49 years of age, 50-59 years of age, and 60 years of age and older.
- Have you ever had a mammogram? Yes/No
- Have you ever been diagnosed with breast cancer? Yes/No
- Currently, at what age does Susan G. Komen recommend for women at average risk to have a mammogram once a year? 30, 40, 50, 60
- What is your race? White, Black or African American, American Indian or Alaska Native, Asian (e.g. Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese), Native Hawaiian or Other Pacific Islander (e.g. Guamanian/Chamorro, Samoan), and Other
There are four common survey methods: mailed, Internet, telephone and face-to-face. The Community Profile Team will need to consider the advantages and disadvantages of each method, the resources available to conduct the survey (e.g. use of trained personnel for telephone surveys, money for surveys/stamps, cost of telephone use, and time for survey development/data entry), the time frame that each method takes, the response rates, if it will reach the target population(s) (e.g. household P.O. boxes, homeless shelters, rental properties), and if the target population(s) has/have the ability to respond to a survey (e.g. read, write or understand the language in which the survey is presented). A table listing the advantages and disadvantages of each method is available in the Qualitative Data Toolkit available on myKomen.

When using a survey, the Community Profile Team needs to be aware of four potential sources of error and the impact that these errors have in making generalizations about a community during data analysis and interpretation. By understanding these errors during survey development, processes can be implemented to reduce the impact of the errors.

- **Sampling error:** The result of surveying only some, and not all, elements of the target population. To reduce this type of error the Community Profile Team may increase the sample size and/or use stratification by splitting the sample into strata based on mutually exclusive characteristics.
  - For example: An organization surveyed households within a ten county area to ask their perceptions on the barriers to mammography screening in their county, but only received between 15-20 responses per county- far too few to provide an accurate estimate of the barriers in each county, or the ten county service area as a whole.

- **Coverage error:** The result of not allowing all members of the target community(ies) to have an equal or known non-zero chance of being sampled for participation in the survey. This commonly occurs when the survey participation list is chosen from an organization’s database which does not contain everyone in the target community. Finding other reliable sources that may have contact information for the target...
population, or performing specific outreach to those at greatest risk of being undercounted (e.g. minorities, poor, homeless, undocumented, isolated), will reduce this type of error.

- For example: An organization surveyed breast cancer survivors about the survivorship programs in a four county area. The list only contained those addresses in the local organization’s database. Knowing that the database does not contain all the breast cancer survivors in the target area, the results are only representing those who have made contact with the local organization.

- **Measurement error:** The result of poor question wording, or questions being presented in such a way, that inaccurate or un-interpretatable answers are obtained\(^1\). To reduce this type of error, the Community Profile Team can (1) pilot test the survey with a group of individuals that are similar to the sample population, (2) seek feedback from experts in survey development/measurement and content of the survey (e.g. breast health expert); and (3) double-check data entry for accuracy.

  - For example: An organization's survey of health care providers in a county asked how breast health and breast cancer services have changed during the past five years using these answer choices: (1) increased a lot; (2) increased somewhat; (3) increased a little; or (4) decreased. The answer could not be interpreted clearly because it was not clear what was meant by breast health and breast cancer services (screening, diagnostic, treatment), they did not define the degree of difference between each of the answers (e.g. what is the difference between increased a lot and increased somewhat?), and three of the four answers were indicating an increase, biasing the results towards an “increase”.

- **Non-response error:** The result of people who respond to a survey being different from sampled individuals who did not respond\(^1\). Those that are more likely not to respond to a survey include those that are low income, racial and ethnic minorities, the extremely old and the less educated. To reduce this type of error: (1) the sample can receive reminders and/or incentives; (2) the population that is suspected to have a non or low response may be oversampled; (3) the results can be weighted to count respondents for more or less; and/or (4) interviews can occur with a person who is not in the sample to be a proxy for someone that did not participate.

  - For example: A state-wide, random sample web-based survey of breast cancer survivors which was designed to estimate the number and type of breast health screenings that were performed prior to them being diagnosed with breast cancer. The response rate to the survey was 47%, predominately from women who self-reported as White with yearly household income greater than $50,000; therefore, pre-breast cancer diagnosis screening behaviors of minorities and those with household incomes less than $50,000 are underrepresented in the final results and generalizations about the target population would be inaccurate.
Qualitative Data Toolkit: Survey Process

Planning and Implementing a Survey

Prior to selecting a survey as a data collection method, the Community Profile Team should have reviewed the data, determined the questions to be answered and defined the target population(s). The demographic and statistical data helped narrow the focus areas within the Affiliate’s service area. The Health Systems Analysis review informed the Community Profile Team of the target population(s) from a geographic area that is needed to be reached in order to answer the questions about the breast health/cancer problems. The survey can include questions that will fill gaps in the data and will provide in-depth understanding of the issue.

Develop Data Collection Tools:
There are three fundamental characteristics of a good survey: (1) the survey tool measures what it is supposed to (validity), (2) the survey tool produces stable and consistent results (reliability), and (3) it convinces respondents to cooperate. Overall, the respondents must be able to understand the question as intended, have the information needed to answer the question, and be willing and able to provide an answer in the format presented.

The data that is collected is only as good as the survey questions developed. Survey questions may fail in their purpose for many reasons— including using the wrong words or structure that results in questions that may be unanswerable by many participants. One sure way to obtain good response rates is to ask questions that are easy for many to answer. A well-designed survey takes time to develop and makes the task of responding as easy as possible to reduce participant burden.

Survey Design Process:
1. List the questions that need to be answered from the quantitative data and health system analysis review.
2. Under each question, list the survey question topics.
3. List all required ancillary information (background variables).
4. Do a web and literature search for questions from other surveys on similar topic content.
5. Compare the questions and answers to the data analysis process to make sure that they are compatible.
6. Draft the survey introduction (or cover letter).
7. Draft new questions.
8. Propose a question order. It is helpful if the first question is relevant to the topic, easy to answer, interesting, applicable to and answerable by most respondents, and is a closed-format. In addition, it is best practice to have the demographics as the last section.
9. Try out the draft instrument on a colleague.
11. Test survey on a small sample of the population or with a panel of experts.
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People are willing to respond to (1) surveys that are “attractive” (e.g. believe in the topic or cause, incentive, font size, spacing, length) which minimizes non-response error, and (2) to surveys that they are able to respond accurately to the questions which can reduce measurement error. The longer the survey, the less likely it will be returned if sent by conventional mail or email. Longer surveys may be easier to conduct on the phone or in person if the participant is told ahead of time how much time to set aside. The Community Profile Team needs to remember that the survey should predominately consist of open-ended questions and should account for the amount of time it will take for the participant to write out their answers. The demographic and socioeconomic information may be closed-ended.

Tips for writing survey questions:

- Choose simple over specialized words.
- Choose as few words as possible to pose the question.
- Use complete sentences to ask the questions.
- Avoid vague quantifiers (e.g. few, some, many, lots of) when more precise estimates can be obtained.
- Use equal numbers of positive and negative categories for questions answers.
- Avoid bias from unequal comparison.
- Response categories should be mutually exclusive.
- Be sure that each question is technically accurate.
- Avoid using double negatives in the question.
- Avoid double-barreled questions- one question that asks about two different things.
- Soften the impact of objectionable questions.
- Avoid asking respondents to make calculations.
- Undefined abbreviations and jargon should be avoided.

Sometimes, due to limited resources, it may not be possible to include every question of interest. Therefore, the Community Profile Team should carefully assess the importance of each question. When assessing the questions, the following “Key Decision Guide” can be used to determine the usefulness of each question:

A. Does the survey question measure some aspect of one of the assessment questions?
B. Does the question provide information needed in conjunction with some other variable?
   (If no, to both A and B, drop the question. If yes to one or both, proceed.)
C. Will most respondents understand the question and in the same way?
   (If no, revise or drop. If yes, proceed.)
D. Will most respondents have the information to answer it?
   (If no, drop. If yes, proceed.)
E. Will most respondents be willing to answer it?
   (If no, drop. If yes, proceed.)
F. Is other information needed to analyze this question?  
(If no, proceed. If yes, proceed if the other information is available or can be gotten from the survey.)

G. Should this question be asked of all respondents or a subset of?  
(If all, proceed. If a subset, proceed only if the subset is identifiable beforehand or through questions in the survey.)

After the questions have been developed, the Community Profile Team will need to consider how the survey will be presented to the participant. In developing a visually appealing survey, the Team needs to take into consideration the following best-practices:

- **Survey Format:** Booklet format using either 8 ½ “x14” or 11”x17” paper folded in half lengthwise or print pages on one side only and staple them in the upper left corner.
- **Question Grouping:** Questions that are the most relevant questions to the participant should be presented first to get their “buy-in” in completing the survey. Potentially objectionable questions should be placed towards the end of the survey. Demographic questions should be placed at the very end of the survey and be easy to answer.
- **Instructions:** Not all instructions should be printed at the very beginning. Instructions should be placed at the beginning of each question group or where the participant is ready to act on them.
- **Spacing between Questions:** Spacing between the questions should be enough that it sets the questions and answers apart from each other. In addition, open-ended questions need to ensure enough space for answers to be completely written out.
- **Font Type: For print:** Serif fonts are those that have “little feet” and embellishments that make them more distinct and recognizable; therefore, making them easier to read. Examples of serif fonts include Times New Roman, Palatino, Georgia, Courier, Bookman, and Garamond. **For online:** Sans serif fonts are easier to read. Examples of sans serif fonts include Arial, Courier and Verdana.
- **Font Size:** Font should be an appropriate size that can be read by a participant without needing additional support (i.e. magnifying glass). For example, a different font size may be used on a survey to individuals over 65 years of age versus individuals between the ages 30-50.

Prior to using developed, revised, or adapted survey questions, the questions should be pre-tested to identify problems with the survey and find possible solutions prior to collection. This assists in ensuring that the tools produce stable and consistent results (reliability) and that the tools are measuring what they are supposed to (validity). Tools can be pre-tested by using a small group similar to the target population (20-30 people) or by using a panel of subject-matter experts (3-8 people).
Qualitative Data Toolkit: Survey Process

Questions that should be answered during pre-testing include:

- Does the survey include all of the necessary questions?
- Categories used consistent with other surveys (e.g. Census Bureau, Behavioral Risk Factor Surveillance System)
- Does the survey need multiple questions to tease out topics?
- Can some of the questions be eliminated?
- Are all the words understood?
- Are all the questions interpreted similarly by participants?
- Is the participant likely to read and answer each question?
- Does the mailing package (e.g. envelope, introductory letter, and survey) create a positive impression?

Another tool that will need to be developed to go along with the survey is an introductory letter or script that provides the participant an overview of the survey. The letter or script should contain the following components: purpose of the survey, who is conducting the survey, why is completing the survey important, what will be done with the survey results, who to contact if they have questions, implied consent is provided by returning the survey, and thanking them for their time. If sending a letter, it should be personalized with their first and last name on the Affiliate’s official letterhead and hand signed. Regardless of the type of survey used (e.g. mail or telephone), the introduction is the respondents first impression of the survey and should convey why the survey is pertinent to them. A sample introduction letter and script for surveys are available in the Qualitative Data Toolkit on myKomen.

Select Sampling Technique:
Because it is usually impossible to recruit and study every individual in a given target population, the team will need to select a “sample” from the target population. A sample is a subset or portion of the selected target population. Using sound sampling techniques guarantees that the survey trends are the same as the trends found if the entire population had in fact been interviewed.

The sampling technique is the method used to select the sample of people to survey. The technique selected largely depends on the following criteria:

- Target Population
- Accuracy
- Convenience
- Cost

The following are several sampling techniques the Community Profile Team may consider when choosing participants for a survey:

- **Simple Random Sampling**: Simple random sampling is the best and most common process for selecting a survey sample that accurately reflects the population. To get a simple random sample the Community Profile Team should start by compiling a comprehensive list of the people to survey. For example, if the team wants to survey mammography providers in County X, they must compile a list of **ALL** the mammography
providers in the target area. The team must then determine how many providers are in the study group and how many they must survey. For example, if there are 50 mammography providers and the intention is to interview 25, the team can use a randomization table or computer program to get a true random sample.

- **Systematic Random Sampling**: Systematic sampling is a variation of simple random sampling in which participants are selected in an ordered way. To use this method, the Team will need to start with a list of the target population. Then the team will calculate a sampling interval by dividing the total number of individuals or sites on the list by the needed sample number. Then from the beginning of the list, the Team would count the sampling number and each individual that the sampling number lands on is in the sample.

  For example, the Team has a list of providers numbered from 1 to 400 and needs a sample of 40 from the list. The Team then calculated a sampling interval by dividing the total group number by the needed sample number. In this case a sample of 40 from a list of 400 providers. Divide 400 by 40 (400/40=10). The interval is 10. The first provider chosen to be in the sample would be provider number 10. The second provider chosen would be provider 10 + 10 = 20, and the third provider chosen would be provider 20 +10 = 30, and so on.

- **Snowball Sampling**: Snowball sampling is helpful when there is no list of potential participants available or when the population is hard to reach. The technique’s main advantage is that it allows the Community Profile team to get referrals to potential respondents that are not easy to get to.

  Snowball sampling includes the following steps:
  - Identify a person who meets the criteria
  - Ask them to refer others who also meet the criteria (friends or acquaintances)
  - As they identify names, the snowball gets bigger

  This sampling technique helps identify the target population and gets the number of respondents needed. However, it is important to keep in mind that this technique does introduce bias. Bias occurs when people refer others who are just like them that have similar perspectives and experiences. Bias results in data that is not representative of the target population.

- **Convenience Sampling**: Convenience sampling saves time and effort. It is also fast and less expensive, but gives information that does not reflect the general population. A convenience sample is just that, convenient. These respondents are recruited because they are easy to reach and recruit. Individuals recruited from a breast cancer support group are an example of a convenience sample. Another example of convenience sampling is recruiting from places the target population often frequents (e.g. churches, hair salons, malls).
**Qualitative Data Toolkit: Survey Process**

**Determine Sample Size:**
The number of surveys conducted depends on the resources available to the Community Profile Team. Having said that, it is important to note that the more surveys conducted, the better in terms of guaranteeing enough data to portray a true understanding of what is being assessed. This is especially true, if a survey is the only method used to collect qualitative data.

A sample size calculator can be used to determine the number of completed surveys needed to achieve a 95% Confidence Level (CL) and ±5 Confidence Interval (CI). Confidence level tells how sure one can be, while confidence interval is the margin of error. For example, for a survey of women 40 years of age and older in County Z, the sample size was determined using a 95% CL and ±5 CI. This translates into 143 completed surveys needed from the sample population as per the calculation. In reality, the Community Profile Team received a total of 179 completed surveys. The survey results indicated that 54 percent of participants that were 40 and older received a mammogram in the past year. Therefore, the Team can state that they are 95% sure that the true percentage of women that are 40 and older in County Z receiving a mammogram in the past year is between 49 percent and 59 percent (54% ±5).

http://www.surveysystem.com/sscalc.htm
http://www.raosoft.com/samplesize.html

Affiliates should remember that the sample size is the number of participants needed to complete the selected data collection method. Therefore, the number of surveys sent out will need to be greater than the sample size. For example, an Affiliate has determined that a sample size of 79 completed surveys from African American women that are 40 years old and older is needed for a qualitative survey in County X. From reviewing the literature, they find the average response rate for women in that age group to be 33% when no incentive is included. However, the literature also indicated a lower response rate for women in minority zip codes. The Affiliate conservatively planned on a 30% response rate from the target population. Therefore, the Affiliate would need to send the qualitative survey to 265 African American women that are 40 years and older in County X to receive an estimated 79 completed surveys.

**Using Incentives to Increase Participation:**
When using a survey to gather information, it is best-practice to use incentives to increase the response rate of the sample, particularly when using a mailed survey format. However, in order for the incentive to impact response rate, it must be immediate and have importance to the participant (e.g. money or a gift card). Incentives that are “promised” at a later date (e.g.an entry into a drawing), have minimal impact on survey response rates, may increase cost for implementation, may require the participant to provide their name and address which reduces their feeling of anonymity. When conducting a telephone survey, an immediate incentive can be provided by sending an introductory letter with the incentive indicating that they will be receiving a phone call in a couple of days to complete a survey. For internet surveys, some programs allow the participant to download an incentive (e.g. gift card or coupon) upon completing the survey. Depending on the survey method used (e.g. telephone, internet), including an incentive may increase the costs of implementation (e.g. additional mailing costs to send out incentive).
Collecting the Data:
Selecting the most appropriate way to administer the survey depends on a number of issues, including:

- Types of questions being asked
- Difficulty of the questions
- Timeline
- Target population
- Cost in terms of time and dollars

The following provides an overview of various survey administration methods that can be used individually or in combination to collect data based on the resources available to the Community Profile Team:

- **Mailed Surveys**: Due to the fact that the Community Profile process is not primarily intended for research, the Team may decide that one contact attempt is sufficient for the mailed survey process. However, if the Team is interested in following best-practices for mailed surveys, then they may consider a multi-contact approach that usually consists of four separate mailings. The first mailing is to tell the people the survey is coming, briefly state why the survey is being done and explain that participation will be greatly appreciated. About a week later, the second mailing is sent with a personalized cover letter, survey, postage-paid return envelope, and incentive (optional). Then four to eight days later a postcard is mailed as a follow-up reminding the respondent about the survey and thanking those that have already returned it. The fourth mailing occurs three weeks after the second mailing and is a personalized cover letter, survey, and postage-paid envelope. The fourth mailing is only sent to those that have not returned the survey. In addition, the survey needs to be coded in a way as to be able to track respondents from non-respondents.

- **Internet Surveys**: Internet surveys can be collected via e-mail or through a web-based platform. If conducting the survey through e-mail; the body of the e-mail is usually the introductory letter and the survey can either follow the introductory letter in the body of the email or as an attachment. With this method, the respondent would complete the survey and e-mail it back to the requesting organization. When using an e-mail survey, the Community Profile Team needs to be cautious of size limitations on incoming e-mail messages from organizations, survey design is limited in order to work with the multiple types of e-mail systems, and respondents may be unwilling to open attachments for fear of viruses. Because of these limitations, using a web-based platform may be a better fit for gathering information from the target population. Web-based platforms would allow the Team to design the survey online, choose how to distribute and start collecting responses (e.g. link on website, Facebook, e-news, or in an e-mail message), and provide access to analytical tools to organize the data for interpretation.

**Examples of Web-Based Survey Platforms:**
- eSurveyspro: [www.esurveyspro.com](http://www.esurveyspro.com)
- FluidSurveys: [www.fluidsurveys.com](http://www.fluidsurveys.com)
- QuestionPro: [www.questionpro.com](http://www.questionpro.com)
- Surveygizmo: [www.surveygizmo.com](http://www.surveygizmo.com)
- Survey Monkey: [www.surveymonkey.com](http://www.surveymonkey.com)
Qualitative Data Toolkit: Survey Process

- **Telephone Surveys**: This method may be chosen as results can be obtained in a short duration of time and the interviewer can control who is answering the survey questions, and/or your topic requires discussion in which cannot be achieved through writing. Telephone surveys require advanced planning and procedure development regarding potential issues that may occur during implementation such as: (1) how many times does an interviewer try to call a participant; (2) how does the interviewer handle answering machines; (3) what if the person is out of town for two weeks; (4) what if the number is disconnected; or (5) what if the participant wants to talk to someone in charge. Additional items needed for conducting a telephone survey includes setting a specific location where the interviewers and their supervisor are together in case questions arise, telephone availability, cost of telephone service, training of interviewers, and support materials (e.g. introduction script, survey, call record, and tip sheets that include general survey information/potential questions and answers). Examples of each of these support materials are available in the Qualitative Data Toolkit located on myKomen.

- **Face-to-Face Surveys**: Although this method is usually the most expensive, this may be chosen when the survey is being done locally, when a complete population list cannot be obtained, and/or if the target population will not or cannot respond accurately to another type of survey. The following materials are suggested in conducting face-to-face surveys: (1) advance letter to participants if names and addresses available; (2) interviewer name tag; (3) letter from the survey sponsor that explains the purpose of the survey that can be left with the respondent; (4) interviewers’ manual; (5) instructions to the interviewer of who is to be included in the sample and how they can be located; (6) the survey, and (7) visual aids (if applicable). The interviewers’ manual should include information on the background of the survey, information about how to conduct fieldwork (e.g. scheduling appointments, locating respondents), interviewing techniques, terms and definitions used in the survey, details of the survey, and description of the survey area. Examples of some of these materials are available in the Qualitative Data Toolkit located on myKomen.

**Five Elements Needed for Increasing Survey Response Rates**:
- Respondent Friendly Survey
- Multiple or Follow-up Contact for Mailed Surveys
- Return Addressed Envelopes with First Class Stamps
- Personalization of Correspondence
- Incentives
Analyzing and Drawing Conclusions About the Data:
When using a survey, the data results can be quantitative (e.g. from closed-ended questions) or qualitative (e.g. from open-ended questions), or a combination of both. For the Community Profile, quantitative data analysis is usually presented using numbers, percentages, and averages. Qualitative data analysis involves the coding, analysis and interpretation of themes/categories and descriptions in textual data and determines how they help answer the question(s) identified at the beginning of the process. This part of the qualitative data collection process is highly dependent upon the skills of the Community Profile Team’s qualitative resource. Please refer to Module 4 of the Community Profile Guidebook or Module 4 Toolkit: Data Analysis and Interpretation Section of the Qualitative Toolkit on myKomen.org for additional information on analysis and interpretation.

Sources: