



# **Coping with Technological Disasters Appendix A:**

## **Conducting a Community Survey**

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This appendix provides information on how data on an affected community should be collected before outreach activities begin. It is an example of potential questions or topics to cover in a community survey, as well as some guidelines on conducting focus groups.

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# Introduction

Before one can begin to produce actionable programs to help communities cope with the social and economic impacts related to technological disasters, data on how a community is affected should be collected.

To accomplish this task, community leaders and mental health professionals can collect benchmark information through community surveys. This information can provide a basis to develop and implement a program for mitigating the chronic consequences of technological disasters.

Generally, a professional should be designated to design and administer a community survey. This could include local university social science faculty, private mental health professionals, or a state agency.

## What is Demographic Information?

Demographic information refers to specific characteristics about a group of people. In the case of your community, it is important to determine socioeconomic characteristics (gender, age, occupation, marital status, income, and number of dependents) to identify people variously affected by the disaster.

## Designing a Survey for Your Community

Before designing any survey instrument, the identification of the research objectives must be finalized.

The literature describing technological disasters indicate that community members have measurable mental health impacts, social impacts, and economic impacts following such events. These effects can be determined by administering standardized psychological tests as noted below in the table.

These tests may be easily evaluated and results then interpreted for program use. Other social and psychological measures may be added if deemed necessary.

As a minimum, surveys should include:

- Demographics
- Measure of Social Disruption
- The Impact of Events Scale (IES)
- Depression Scale
- Open ended questions – perceptions of how the event has affected individuals, families, and communities

## Strategies for Collection of Information

Ideally, samples should be representative of the entire community. This will require that the procedures used to administer the survey ensure that every member of the community has an equal chance of selection, at the time of the collection of data. When every resident of a community is surveyed, sampling is not a concern.

Survey instruments can be administered by:

- Mail out or online survey (self-administered)
- Phone (researcher administered)
- Conducted face-to-face (researcher administered)
- Positioned in public places (self-administered)

Mail/online, phone, and personal surveys all present problems for selecting random individuals or households. For mail/online and face-to-face surveys, one can use a random number table or computer assisted random-digit dialing techniques.

More often than not, however, community mental health professionals will want to gather descriptive information to gain a basic understanding of the types of chronic social and psychological problems being experienced in the community.

When considering the type of survey to use, there are some logistical considerations to address.

- Mail out surveys may be costly and reminders may be required to facilitate returns. However, they do not require the use of researchers on phones or door-to-door.
- Email online surveys may require several reminders or incentives to get people to fill them out.
- Phone surveys are faster and less costly than mail surveys. They result in better return rates but may be biased by the researcher's interpretation and coding of respondent's answers.
- Face-to-face surveys require the training and selection of individuals with good interpersonal skills and the ability to record precise information when presented by the respondent. This is the costliest (manpower and timewise) of any of the survey forms.

Your community will need to evaluate resources and determine the most appropriate method for the distribution of your survey.

*If your community is placing surveys in public places, you might consider:*

- Hospitals
- Doctors/dentists offices
- Community centers
- Tribal centers or offices
- Harbors
- Stores
- Public library
- Chamber of Commerce
- City facilities
- Public utility facilities
- Schools
- Barber/beauty shops
- Inserts in local newspapers
- Other areas determine to be frequented by many community members

Surveys placed in public places cannot be considered random. However, by comparing demographic characteristics of the sample to demographic characteristics of the community and estimate of the representativeness of the sample can be made.

## The Survey Instrument: An Example

The example survey below can be modified to fit your community needs and administered to indicate chronic impacts of technological disasters.

Please note that the NIH Disaster Research Response Program (DR2) is the national framework for research on the medical and public health aspects of disasters and public health emergencies. The DR2 website (<https://dr2.nlm.nih.gov>), provided by the National Institute of Environmental Health Sciences and the National Library of Medicine, supports disaster science investigators by offering data collection tools, research protocols, disaster research news and events, and more, including the NIH Rapid Response Survey which is already vetted and approved for ease of use.

### *Community Survey*

How many years have you lived in [insert city]?

How many people live in your household?

How many dependent children live in your household?

What is your marital status?

1. Married
2. Divorced
3. Single
4. Widow/widower
5. Other

What is your ethnic group?

1. White
2. Alaska Native
3. Other

What is your gender?

1. Male
2. Female
3. Other

What is your current occupation?

What was your occupation at the time of the [insert name of technological disaster]?

Years of Education:

Some high school

High school diploma or equivalent

Some college, no degree

College degree

College degree plus graduate studies

Master's degree

Professional degree

Other \_\_\_\_\_

What was your household income in [insert year] before taxes? (Determine ranges of incomes based upon the high- and low-income levels of your community.)

Please read these statements made by people experiencing stressful life events. For each statement, please indicate (by circling the appropriate number) how often it was true for you about the [insert name of event] during the past seven (7) days. It might not have happened at all during the past week or during the past week it might have occurred only rarely, sometimes, or often. Circle one response for each statement.

	Not at all	Rarely	Some-times	Often
1. I thought about it when I didn't want to. (The thought of the [disaster name] just popped into my head).	1	2	3	4
2. I avoided letting myself get upset when I thought about it or was reminded of it.	1	2	3	4
3. I tried to remove it from my memory.	1	2	3	4
4. I had trouble falling asleep or staying asleep.	1	2	3	4
5. I had waves of strong feelings about it.	1	2	3	4
6. I had dreams about it.	1	2	3	4
7. I stayed away from reminders of it.	1	2	3	4
8. I felt as if it hadn't happened or wasn't real.	1	2	3	4
9. I tried not to talk about it.	1	2	3	4
10. Pictures about it popped into my mind.	1	2	3	4
11. Other things kept making me think about it.	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	1	2	3	4
13. I tried not to think about it.	1	2	3	4
14. Any reminder brought back feelings about it.	1	2	3	4
15. My feelings about it were kind of numb.	1	2	3	4
16. I felt physically uncomfortable (heart racing, sweating, stomach upset) when I was reminded of the event.	1	2	3	4
17. I was unable to remember important aspects of the event.	1	2	3	4
18. I felt I couldn't respond to things emotionally the way I used to.	1	2	3	4
19. I was more jumpy than usual.	1	2	3	4
20. I was more frequently on guard to extra alert to possible danger.	1	2	3	4
21. I had more difficulty trusting others.	1	2	3	4

*Center for Epidemiologic Studies Depression Scale (CES-D), NIMH*

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

	<b>During the Past Week</b>			
	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I did not feel like eating; my appetite was poor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I felt that I could not shake off the blues even with help from my family or friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I felt I was just as good as other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I had trouble keeping my mind on what I was doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I felt depressed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I felt that everything I did was an effort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I felt hopeful about the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I thought my life had been a failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I felt fearful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. My sleep was restless.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I was happy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I talked less than usual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I felt lonely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. People were unfriendly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I enjoyed life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I had crying spells.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I felt sad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I felt that people dislike me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I could not get "going."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



These statements are about activities which people sometimes use to help them deal with their feelings after experiencing a negative or traumatic event. Please respond based on the activities you have engaged in to cope with the event.

<b>Since the event, I have:</b>	<b>Not at all</b>	<b>Rarely</b>	<b>Some-times</b>	<b>Often</b>
1. talked with friends or relatives about my problems.	1	2	3	4
2. found myself often asking others for help.	1	2	3	4
3. done things to get the attention of others.	1	2	3	4
4. involved myself in recreation or pleasurable activities.	1	2	3	4
5. bought some new things for myself.	1	2	3	4
6. completed housework (cleaning, polishing, straightening).	1	2	3	4
7. expressed little emotion to others.	1	2	3	4
8. complained to friends and relatives about my problems.	1	2	3	4
9. tried to take what came without letting it bother me and without complaining.	1	2	3	4
10. expressed anger that others were not making adequate efforts to help me.	1	2	3	4
11. become more involved in life and taken on more responsibilities.	1	2	3	4
12. tried not to bother other people with how I felt.	1	2	3	4
13. masked my true feelings when with others.	1	2	3	4
14. felt angry but held it in.	1	2	3	4
15. told myself that some good for others could come out of my misfortune.	1	2	3	4
16. let others tell me how to get better.	1	2	3	4
17. decided that there was a purpose behind my adversity.	1	2	3	4
18. let other see how bad I feel	1	2	3	4
19. kept my feelings bottled up inside.	1	2	3	4
20. done something constructive.	1	2	3	4
21. depended on my family or friends more than usual.	1	2	3	4
22. told myself that my problems would pass.	1	2	3	4
23. tried to act as if I wasn't feeling bad.	1	2	3	4
24. sought information from professional experts.	1	2	3	4

In this next section we would like to understand how you react to things at work. Complete each sentence with the first thing that comes to your mind. For example, if I were to say: “I get angry when...,” you might respond by saying, “when I’m working, and somebody bothers me.”

1. When I have a problem, I...
2. When someone gets angry with me, I...
3. When I am not treated right, I...

## Conducting Focus Group Interviews

As one approaches communities impacted by technological disasters, the question of how to assess social impacts arises. The initial process of collecting data can involve interaction between the interviewer and small groups of respondents, referred to as focus groups.

Focus groups are basically group interviews, although not in the sense of an alternation between the researcher's questions and the research respondents' responses. Instead, the reliance is on interaction within the group, based on topics that are suggested by the researcher, who typically takes the role as moderator.

This method of collecting information lets the researcher access data and insights that are less accessible by other data collection methods. It allows one to select small representative samples of the population. These focus groups will give the researcher information that will be useful as one designs a survey instrument to conduct a community study.

The primary advantage focus groups offer is the opportunity to observe a large amount of interaction on a topic in a limited period of time. This will require that the moderator be experienced in focus group interviews. An observer who maintains too much control over the focus group will stifle the flow of information, while too little control will permit members of the focus group to ramble or dominate the group.

Data collected from the focus groups may later be used as part of a larger effort to "triangulate" different forms of data collection on the same topic. It is the focus groups' independent, self-contained nature which is the feature that allows them to contribute to the "triangulation."

The following information is presented to aid in selecting and conducting focus groups:

- Select a mental health or other qualified professional from the local community, if possible, to conduct focus groups.
- Review the community characteristics and develop focus groups to represent each of the characteristics of the community (if one group within the community's population is omitted, then your sample will be biased).
- Keep the focus group manageable (6 to 10 individuals).
- Conduct the focus groups in a local setting (it is always better to place individuals in an environment they are comfortable in to induce interaction).
- Listen for indicators of:
  - What members of the focus group feel are important.
  - Questions that remain unanswered by members of the focus group. These are topics for information distribution in the future.
  - The specific areas where participants agree and disagree.
  - How the members of the focus group attempt to resolve differences and build consensus. This may provide a starting point for mitigating chronic impacts.

The most important way that focus groups can contribute to a project is related to the design of the survey instrument. The idea is to use a small number of exploratory focus groups in the very early stages of the research to guide later construction of the survey questions. This will provide researchers with the participants' perspective, allowing for an accurate understanding of questions and mitigation activities associated with the technological disaster.