NEDARC
TECHNIQUES IN
DEVELOPING A SURVEY

October 12th-14th, 2016
Seattle, WA
# Techniques in Developing a Survey

**NEDARC Workshop**  
October 12th-14th, 2016 – Seattle, WA

## Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:15</td>
<td>Welcome and Introduction</td>
</tr>
<tr>
<td>9:15 – 9:45</td>
<td>Introduction to Survey Research</td>
</tr>
<tr>
<td>9:45 – 10:00</td>
<td>BREAK</td>
</tr>
<tr>
<td>10:00 – 11:00</td>
<td>What is Your Research Question?</td>
</tr>
<tr>
<td>11:00 – 12:00</td>
<td>Identifying Your Target Audience/ Survey Modes</td>
</tr>
<tr>
<td>12:00 – 1:30</td>
<td>LUNCH ON YOUR OWN</td>
</tr>
<tr>
<td>1:30 – 3:15</td>
<td>Writing Survey Questions</td>
</tr>
<tr>
<td>3:15 – 3:30</td>
<td>BREAK</td>
</tr>
<tr>
<td>3:30 – 5:00</td>
<td>Putting the Survey Instrument Together</td>
</tr>
</tbody>
</table>

## Day 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 10:15</td>
<td>Web Survey Software</td>
</tr>
<tr>
<td>10:15 – 10:30</td>
<td>BREAK</td>
</tr>
<tr>
<td>10:30 – 11:15</td>
<td>Deciding Who to Include in the Sample</td>
</tr>
<tr>
<td>11:15 – 12:15</td>
<td>Testing the Survey Instrument</td>
</tr>
<tr>
<td>12:15 – 1:45</td>
<td>LUNCH ON YOUR OWN</td>
</tr>
<tr>
<td>1:45 – 3:15</td>
<td>Implementing Your Survey</td>
</tr>
</tbody>
</table>

## Day 2 – cont.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:15 – 3:30</td>
<td>BREAK</td>
</tr>
<tr>
<td>3:30 – 4:30</td>
<td>Collecting &amp; Preparing Data</td>
</tr>
</tbody>
</table>

## Day 3

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:45</td>
<td>Drafting Project Survey Questions</td>
</tr>
<tr>
<td>9:45 – 10:30</td>
<td>Sharing Results &amp; Taking Action</td>
</tr>
<tr>
<td>10:30 – 10:45</td>
<td>BREAK</td>
</tr>
<tr>
<td>10:45 – 12:00</td>
<td>Survey Review Activity</td>
</tr>
</tbody>
</table>

©NEDARC  * www.nedarc.org
WHAT IS YOUR RESEARCH QUESTION?

IDENTIFYING YOUR TARGET AUDIENCE/SURVEY MODES

PUTTING THE SURVEY INSTRUMENT TOGETHER

TESTING THE SURVEY INSTRUMENT

IMPLEMENTING YOUR SURVEY

COLLECTING & PREPARING DATA

DECIDING WHO TO INCLUDE IN THE SAMPLE

WEB SURVEY SOFTWARE

WRITING SURVEY QUESTIONS

SHARING RESULTS & TAKING ACTION

©NEDARC * www.nedarc.org
Survey Development Plan

Any successful survey development & implementation begins with a well thought out plan. The purpose of this plan is to provide you with a road map as well as a very important timeline to ensure that you’ve done all you can to improve your survey.

1) Introduction to Survey Research

What is the project you plan on working on?

______________________________________________________________________________

2) What is Your Research Question?

Before you write your research question, think about the following and jot down a few ideas under each section.

• What is already known about this subject?
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________

• What are you interested in finding out?
  __________________________________________________________
  __________________________________________________________

• What do you expect to learn and why?
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________

Now, draft a research question or questions for your survey

Draft a purpose statement for your survey

Share your research question and purpose with someone in the workshop. After discussing your question, try to draft another version of your research question and purpose.
Revise and write your close to final Research Question

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

3) Identifying Your Target Audience / Survey Modes

Who are the main groups you want to gather data from and about? Is there more than one target audience? If you have more than one target audience, you may want to answer these questions for each one.

Who is the target audience for your survey? Include some of their characteristics and interests. This may help you later as you ponder barriers and challenges.

_________________________________________________________________________
_________________________________________________________________________

Inclusions (the members of my target population who are eligible to take the survey):

• _______________________________________________________________________
• _______________________________________________________________________
• _______________________________________________________________________
• _______________________________________________________________________
• _______________________________________________________________________
• _______________________________________________________________________  

Exclusions (the criteria to rule out certain people from the inclusions):

• _______________________________________________________________________
• _______________________________________________________________________
• _______________________________________________________________________
Which survey mode will you use to initially launch your survey?

☐ Web    ☐ Paper    ☐ Mixed

Why did you choose this mode? (describe why you chose that method)
_________________________________________________________________________
_________________________________________________________________________

Preliminary Plan for this Method (what do I need to purchase/consider when using this method?):
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

4) Writing Survey Questions

Start brainstorming the different types of questions you will need for your survey. Then begin writing a first draft of your questions (feel free to use a computer).

1

Question on: ______________________________________________________________

Purpose of Question: __________________________________________________________
_________________________________________________________________________

Question Type: (e.g., demographic, attitudinal, factual, etc.) ______________________
Question Format: *(e.g. multiple choice, text box, etc.)*

2

Question on:

Purpose of Question:

Question Type: *(e.g., demographic, attitudinal, factual, etc.)*

Question Format: *(e.g. multiple choice, text box, etc.)*

3

Question on:

Purpose of Question:

Question Type: *(e.g., demographic, attitudinal, factual, etc.)*

Question Format: *(e.g. multiple choice, text box, etc.)*

4

Question on:

©NEDARC * www.nedarc.org
Techniques in Developing a Survey

Purpose of Question:

__________________________________________________________________
__________________________________________________________________

Question Type: (e.g., demographic, attitudinal, factual, etc.)

Question Format: (e.g. multiple choice, text box, etc.)

Question on:

__________________________________________________________________

Purpose of Question:

__________________________________________________________________

Question Type: (e.g., demographic, attitudinal, factual, etc.)

Question Format: (e.g. multiple choice, text box, etc.)

Question on:

__________________________________________________________________

Purpose of Question:

__________________________________________________________________

Question Type: (e.g., demographic, attitudinal, factual, etc.)

Question Format: (e.g. multiple choice, text box, etc.)
Question Format: *(e.g. multiple choice, text box, etc.)*

7

Question on:

Purpose of Question:

Question Type: *(e.g., demographic, attitudinal, factual, etc.)*

Question Format: *(e.g. multiple choice, text box, etc.)*

8

Question on:

Purpose of Question:

Question Type: *(e.g., demographic, attitudinal, factual, etc.)*

Question Format: *(e.g. multiple choice, text box, etc.)*

9

Question on:
Purpose of Question:

______________________________________________________________

Question Type: (e.g., demographic, attitudinal, factual, etc.)

______________________________________________________________

Question Format: (e.g. multiple choice, text box, etc.)

______________________________________________________________

Question on:

______________________________________________________________

Purpose of Question:

______________________________________________________________

Question Type: (e.g., demographic, attitudinal, factual, etc.)

______________________________________________________________

Question Format: (e.g. multiple choice, text box, etc.)

______________________________________________________________
First Draft of Questions:

1)

2)

3)

4)

5)
6)

7)

8)

9)

10)
Second Draft of Questions:

Peer Review Reminders:
- Are the questions clearly worded?
- Is the potential for bias introduced in any of the questions?

1) 

2) 

3) 

4)
Second Draft of Questions (cont):

5)

6)

7)

8)
5) Putting the Survey Instrument Together

After grouping related questions, how many groups do you have? ________

What are the titles of your groups? *(these will be the section headers in your survey)*

- __________________________
- __________________________
- __________________________
- __________________________
- __________________________
- __________________________

If you chose Web mode, write your welcoming page message here
Create your conversational language to go between each section

Will your survey be confidential or anonymous?

☐ Confidential (track names)  ☐ Anonymous (not tracking names)

Style Guide for Survey Instrument:

Question font size: ______

Questions font style: ______

Response option font size: ______

Response option font style: ______

Indent/tab size: ______

Spacing between lines:

☐ Single  ☐ 1.5  ☐ Double  ☐ Other ______

Spacing between questions:

☐ Single  ☐ 1.5  ☐ Double  ☐ Other ______

Arrow/line outline weight:

☐ .75  ☐ 1.5  ☐ 2.0
6) Web Survey Software

Of the web based survey software demonstrated at the workshop, which one do you think would work best for your audience?

☐ SurveyMonkey  ☐ Google Forms  ☐ QuestionPro  ☐ SurveyGizmo

What do I need to do to set up and use the survey software I plan to use?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

7) Deciding Who to Include in the Sample

Which sample design method are you going to use to collect your sample?

☐ Probability Sampling

☐ Non-Probability Sampling

How many agencies, hospitals, or other are in your population of interest?

☐ Agencies: Total #_____________

☐ Hospitals: Total #_____________

☐ Other: Total #_____________

How many agencies, hospitals, or other do you plan to survey?

☐ Agencies: Total #_____________
Do you have an electronic list of all of the agencies or hospitals or OTHER you indicated in the previous question? (select one)

☐ Yes  ☐ No

If No, where or how do you think you could develop an electronic list for all of the agencies or hospitals or OTHER you indicated above? Some suggestions might include EMS Bureau Director, EMS Ambulance Association, other EMS associations in your state, and Regional Coordinators for your agencies. For a list of hospitals in your state, you might be able to obtain a list(s) from the Hospital Association, Trauma Coordinators, and from your Children’s Hospitals.

8) Testing the Survey Instrument

Pretesting: What method(s) would you use to pretest your survey questions?

Pilot testing: What method(s) would you use to pilot test your survey and implementation plan?
9) Implementing Your Survey

Based on the survey mode you plan to use, list any barriers you foresee to personalizing your survey correspondence.

______________________________________________________________________________

______________________________________________________________________________

Discuss possible ways to overcome the barriers listed above.

______________________________________________________________________________

______________________________________________________________________________

Do you have a relationship with any organizations that could endorse/ support your survey? The ideal organization is one that already has a personal relationship with your respondents. List the possible organizations here:

______________________________________________________________________________

______________________________________________________________________________

List three to five possible ways that you plan to personalize your survey:

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________

5-Contact System

I. PRENOTICE

Deciding your contact mode…. What type of prenotice contact will you send?

☐ Email    ☐ Mailed Letter
List any barriers you foresee to sending a survey prenotice to your respondents.

______________________________________________________________________________

______________________________________________________________________________

Discuss possible ways to overcome the barriers listed above.

______________________________________________________________________________

______________________________________________________________________________

Create your prenotice letter/email according to the guidelines taught at this workshop or based on the template provided by NEDARC. Keep a copy of your prenotice letter/email with this plan.

What token of appreciation are you going to mention in the prenotice letter/email? If you did not include a token of appreciation, please explain why you did not.

______________________________________________________________________________

______________________________________________________________________________

What date do you anticipate sending the prenotice contact? ________________

II. SURVEY INVITATION

What type of survey invitation will you send?

☐ Email    ☐ Mailed Letter

Create your survey invitation according to the guidelines taught at this workshop or based on the template provided by NEDARC. If you mentioned a token of appreciation in your prenotice contact, do not forget to include the token with the survey invitation. Keep a copy of your survey invitation letter/email with this plan.
What date will you send the survey invitation (should be sent approximately 3-4 days after the prenotice contact)? _____________

III. THANK YOU & REMINDER POSTCARD

What type of thank you & reminder postcard contact will you send?

☐ Email  ☐ Mailed Postcard

Did you list any organizations that may already have a personal relationship with your respondents? Consider having that organization send the Thank You & Reminder Postcard. Think of how the language should be constructed for this type of follow-up.

For example:
Dear Mr. H –
I am following up with you regarding the survey invitation you received from Ms. Y, EMSC Program Manager. I encourage you to complete this survey as I believe….

Create your Thank You & Reminder Postcard according to the guidelines taught at this workshop or based on the template provided by NEDARC. Keep a copy of the reminder postcard/email with this plan.

What date will you send the Thank You & Reminder Postcard (generally sent approximately 3-4 days to a week after the survey invitation)? _____________

IV. REPLACEMENT SURVEY

Which survey mode will you use for the replacement survey? (consider switching the survey mode you indicated for mode for added stimuli)

☐ Web  ☐ Paper

What type of replacement survey contact will you send?

☐ Email  ☐ Mailed Letter
Create your replacement survey contact according to the guidelines taught at this workshop or based on the template provided by NEDARC. Keep a copy of the replacement survey letter/email with this plan.

What date will you send the replacement survey *generally sent approximately 2 to 4 weeks after the postcard*? ______________

V. FINAL CONTACT

What method do you plan to use for the final contact *(e.g., certified letter, telephone call, FedEx/UPS)*? ______________

Create a list of the non-respondents *(cannot be done until after survey has been launched)*.

Make an effort to contact each non-respondent personally *(preferably by telephone)*. Use a script or something similar according to the guidelines taught at this workshop or based on the template provided by NEDARC.

*For example:*

Hello! I’m calling because of a special effort being made by the Emergency Medical Services for Children Program to better understand the needs of children in the pre-hospital environment. Recently, we sent you a survey to complete. I wanted to follow-up and make sure that you received our survey invitation; it was sent to a Mr. H. [Pause]. Your response is important to us. Will you be able to complete the survey on the telephone today with me?

What date(s) do you plan to personally contact the non-respondents *(generally done approximately 2 to 4 weeks after the replacement survey)*? ______________
10) Collecting & Preparing Data

Complete the following information for your database / data capture plan. You would use this information, along with your data dictionary, to create a spreadsheet or database for your survey.

Identify the spreadsheet/database program you will use (e.g., Excel, ACCESS, ORACLE, SPSS, SAS)

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

For returned paper surveys, when will the data be entered and who is responsible for this?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

Brainstorm ways that errors might occur in the data and how you can prevent them. This depends on the software you use, your data elements, and the database structure.

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
### Mock Table Template

<table>
<thead>
<tr>
<th>Title</th>
<th>(Variable 1)</th>
<th>(Categories of Variable 1)</th>
<th>(Categories of Variable 2)</th>
<th>(Categories of Variable 2)</th>
<th>(Categories of Variable 2)</th>
<th>(Categories of Variable 2)</th>
<th>(P-Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Variable 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Comparison Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comparison Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variable Category 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variable Category 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variable Category 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variable Category 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Variable/Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Use a Data Dictionary to define each data element in detail and to describe checks that you will use to ensure data quality

<table>
<thead>
<tr>
<th>PAGE/QUESTION NUMBER</th>
<th>VARIABLE NAME/LABEL</th>
<th>POSSIBLE VALUES</th>
<th>DESCRIPTION/PURPOSE</th>
<th>DATA TYPE</th>
<th>CHECKS AND RESTRICTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11) Sharing Results &amp; Taking Action</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thinking of your research question and purpose of your survey, describe the following in the table on the next page:

- What audiences need to be informed of progress and results of your survey to help you achieve your desired outcomes?
- What is the best method of communicating survey results to that audience?
- What would you like audience members to know and/or do in response to having your survey results?
4: Writing Questions

Questions to Complete during Presentation

**Problematic Question 1:**

Have you completed your medical internship and residency?
- Yes
- No

What’s the problem?

How would you fix it?

**Problematic Question 2:**

What brand of smartphone do you own?
- iPhone
- Samsung
- Other, please specify: ______

What’s the problem?

How would you fix it?
Problematic Question 3:

Where did you hear about the open position at our hospital?
  o Online job posting
  o A poster in the hospital waiting room

What’s the problem?

How would you fix it?

Problematic Question 4:

How did you first hear about last week’s Tornado?
  o From someone at work
  o On TV
  o The radio
  o Before leaving home for work
  o While driving to work

What’s the problem?

How would you fix it?
Sample Demographic Questions

Here are some common ways surveys have asked about demographic information.

**Ethnicity and Race as separate questions**
The federal government defines Hispanic/Latino as an ethnic group, not a race, and therefore asks about this in a question separate from race. The approach is to first ask about Hispanic ethnicity, then ask the race question, like these examples illustrate:

Are you of Hispanic, Latino, or Spanish origin?
- Yes
- No

*(note, some questions also add some examples in the question stem, such as: Are you of Hispanic, Latino, or Spanish origin, such as Mexican, Puerto Rican or Cuban?)

Which of the following describes your race? You may select as many as apply.
- American Indian, Native American, or Alaska Native
- Asian or Asian-American
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Some other race, please specify: _____________________

**Race and ethnicity combined**
It is also common to see people ask about Hispanic/Latino ethnicity in the same question as race, such as done below:

Which of the following describes your race? You may select as many as apply.
- American Indian, Native American, or Alaska Native
- Asian or Asian-American
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander
- White
- Some other race, please specify: _____________________
**Gender**
Most common approach:

Are you male or female?
- Male
- Female

A newer approach that is inclusive of other gender identities:

How would you describe your gender?
- Male
- Female
- In another way, please specify if you’d like:
  ________________________________

**Age**
Commonly determined by either asking for an age in years or asking for birth month and year. The advantage of asking for birth month/year is the ability to always be able to accurately determine a person’s age no matter when the data are being analyzed. For example, if you go back to analyze your data a year or two later, you can accurately calculate current age rather than having to use outdated years as reported by respondents.

What is your age?

____ Years

In what month and year were you born?

_______ / ________ ________

MM     YYYY
Marital status

Which one of the following best describes your relationship status?
- Married
- Living with a partner, unmarried
- Divorced
- Separated
- Widowed
- Never been married

Education level

What is the highest level of school you have completed?
- Less than 12th grade
- High school graduate or GED
- Some college, no degree
- 2 year college degree/associate’s degree
- 4 year college degree/bachelor’s degree
- Some postgraduate or professional schooling, no postgraduate degree
- Graduate or professional degree, including master’s, doctorate, medical, or law degree

Income

These categories have been used to ask income in surveys of the general public. Depending upon your survey population, you may want to readjust the values of the categories in your scale. For example, if you are surveying a relatively wealthier group, you may want to combine several of these lower income categories together and add more distinctive categories above $150,000.

Last year, that is in [2015], what was your household’s total income from all sources, before taxes?
- Less than $10,000
- $10,000 to less than $20,000
- $20,000 to less than $30,000
- $30,000 to less than $40,000
- $40,000 to less than $50,000
- $50,000 to less than $75,000
- $75,000 to less than $100,000
- $100,000 to less than $150,000
- $150,000 or more
Example Invitation Letter

Familiar and respected sponsorship

WASHINGTON STATE
UNIVERSITY

Date → November 6, 2007

Inside address → Lewiston Area Resident
491 Winding Ridge Road
Lewiston, ID 83501

Salutation → Dear Lewiston Area Resident,

Appeal for help → I am writing to ask for your help in understanding the quality of life in the Lewiston/Clarkston area and how residents are being affected by a variety of things from the availability of jobs and healthcare to the use of cell phones. The best way we have of learning about these issues is by asking all different kinds of people who live in the area to share their thoughts and opinions.

Why you were selected → Your address is one of only a small number that have been randomly selected to help in this study.

Who should answer and why → To make sure we hear from all different types of people who live in the area, please have the adult (age 18 or over) in your household who has had the most recent birthday be the one to complete the enclosed questionnaire.

Confidential and voluntary → The questions should only take about 15 minutes to complete. Your responses are voluntary and will be kept confidential. Your names are not on our mailing list, and your answers will never be associated with your mailing address. If you have any questions about this survey of Lewiston/Clarkston area residents, please call Thom Allen, the study director, by telephone at 1-800-833-0867 or by email at serv@wsu.edu. This study has been reviewed and approved by the Washington State University Institutional Review Board, and if you have any questions about your rights as a participant in this study, you may contact them by telephone at 509-335-3668.

Token of appreciation → By taking a few minutes to share your thoughts and opinions about life in the Lewiston-Clarkston area you will be helping us out a great deal, and a small token of appreciation is enclosed as a way of saying thank you.

Personal touch → I hope you enjoy completing the questionnaire and look forward to receiving your responses.

Thank you → Many Thanks,

Real signature →

Don A. Dillman
Regents Professor and Deputy Director
April 13, 2012

Seattle Area Resident
55 Rainier St.
Seattle, WA 98119

Dear Seattle Resident

Every person in Washington needs water. In many parts of the state, the same sources of water are used by households, businesses, farms, and wildlife areas. Sometimes it may be possible to meet all of these water requests, but at other times, doing so may be quite tough. One of the challenges Washington faces is how to balance many different water uses.

I am writing to ask for your help in improving our understanding of residents’ views on water issues in Washington. The best way we know how to do this is by asking people throughout the state to share their thoughts and opinions with us. Your address is one of only a small number that have been randomly selected to help in this study.

To make sure we hear from all different types of people who live in the state, please have the adult (age 19 or over) in your household who has had the most recent birthday be the one to complete the enclosed questionnaire. Please return the completed questionnaire in the enclosed stamped envelope. Your responses are voluntary and will be kept confidential. Your names are not on our mailing list, and your answers will never be associated with your mailing address. If you have any questions about this survey please contact Thom Allen by telephone at 1-800-035-0007 or by email at survey.support@wsu.edu.

By taking a few minutes, you will be adding greatly to our understanding of residents’ opinions on water decision-making. I hope you enjoy completing the questionnaire and I look forward to receiving your responses.

Many Thanks,

[Signature]

Don A. Dillman
Project Director
Washington State University

P.S. We have enclosed a small token of appreciation as a way of saying thanks for completing the survey!
Workshop Presentations
**Techniques in Developing a Survey**

That’s Right for You

---

**Day 1**

- Introduction to Survey Research
  - What is Your Research Question?
  - Identifying Your Target Audience/Survey Modes
  - Writing Survey Questions
  - Putting the Survey Instrument Together

---

**What is Survey Research?**

- Systematic collection of data
- Uses structured, pre-determined questions
- Respondents self-report

**Why Use a Survey?**

- Surveys are conducted for a great variety of reasons within all sorts of populations
- Answer a particular question or solve a specific problem
- Surveys can vary in size, scope, and how they are administered

---

©NEDARC * www.nedarc.org

©NEDARC * www.nedarc.org

10/04/16

Techniques in Developing a Survey
When to Use a Survey

- When you cannot observe the behavior, beliefs, characteristics of a group
- If you need to collect a lot of data
- If you need timely data

Pros of Using Surveys

- Relatively easy to administer
- Cost effective
- Collect info from many
- Timely
- Your topic is hard to observe

Cons of Using Surveys

- Self-reported data
- Social desirability
- Survey saturation
- Differences in interpretation of questions

Surveys Modes

- Mail/Paper
- Web-based
- Telephone
- Mixed-mode

©NEDARC * www.nedarc.org
Current Landscape

- 98% of US households have a phone (landline or mobile)
- 96% have USPS mail delivery
- 85% use internet
- 73% have internet at home

Technology & Culture Changes

- Voicemail
- Caller ID
- Email filters/preview display
- Gated communities
- Locked Apartment complexes

Percent of U.S. Households that have or use:

<table>
<thead>
<tr>
<th>Percent</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>98%</td>
<td>Phone (mobile or landline)</td>
</tr>
<tr>
<td>96%</td>
<td>USPS mail delivery</td>
</tr>
<tr>
<td>85%</td>
<td>Internet</td>
</tr>
<tr>
<td>73%</td>
<td>Have internet at home</td>
</tr>
</tbody>
</table>

Tailored Design Method

- Approach to survey design
- Better results if you:
  - Reduce costs
  - Increase benefits
  - Build trust

* From Don Dillman’s Tailored Design Method
Importance of Preparation & Pretesting

• Preparation is key!
• Pretest questions & survey procedures
• Interviewers should practice prior to deployment

Examples of EMSC Surveys

• UT EMSC protocol adoption
• ND EMS provider attrition
• IRECC Family-centered care

Survey Participant Privacy

Data should be kept confidential or anonymous

Confidentiality

Only investigator and/or the research team can identify responses from individuals
Anonymity

• The project does not collect any identifying information on individuals
• The project cannot link individual responses with identities

Summary

• Survey research = systematic collection of data
• Useful when observation isn’t possible
• Pros – Efficient, cost-effective
• Cons – Self-report, social desirability
• Survey modes
• Current environment
• Prep and pretesting is crucial
• Apply Social Exchange Theory
• Confidentiality vs Anonymity
Why??

• Answer a particular question or solve a specific problem
• We want to find out about SOMETHING
• SOMETHING=concept(s) of interest
• How do we take our concept and turn it into a survey that provides data?

How do we measure…

Something that is not always directly or easily observable?

What We Want to Measure

• Beliefs
• Motivational states
• Attitudes
• Knowledge
• Needs
• Emotions
• Perceptions of health
• What else?

Remember

We ask respondent(s) to reconstruct, interpret, judge, compare or evaluate less accessible or non-observable behaviors by using questions or instruments that are already developed or by developing our own.
Operational Definitions

• The questions we ask to gather information about our concept of interest.
• These responses will be coded into variables that will be used to analyze our data.

Operationalize

• Hard to operationalize an indirect measurement.
• Make an abstract concept concrete.

Examples

• A good cook
• Temperature
• Quality of Care

How do we get there?
Research Question
Guides the rest of the steps of your survey process
- Defining the variables to be measured
- How the data will be used
- Choosing the method for collecting your data
- Drawing the sample
- Formulating the questions and questionnaire
- Collecting the data
- Preparing and analyzing your data
- Writing a final report

Without a Research Question
You run the risk of finding that your
- Survey questions do not match your research goals;
- Questions in the survey cannot directly be used to answer your research question;
- Your survey questions only address one aspect of your research question, or only applies to one of several research questions;
- Your questions will not gather the kind of data that you need
First Things First
Formulate Your Research Question

Research Question

• Begins with a problem, an issue that you want to know more about or a situation that needs to be changed or addressed—this is your SOMETHING
• Contributes knowledge or improves practice

Characteristics of a good research question
• Feasible
• Clear
• Significant
• Ethical

Formulate Research Question

• What is already known about this subject?
• What are you interested in finding out?
• Whom do you want to study?
• What do you expect to learn and why?
Steps for Consideration

Write a First Draft

• What effects did 9/11/01 have on the future plans of students who were high school seniors when the World Trade Centers were destroyed?

• Measurable questions: Did seniors consider enlisting in the military as a result? Did seniors consider colleges closer to home?

Draft a Purpose Statement

The purpose of this study is to determine the effects of the 9/11/01 attack on the future plans of high school seniors

Revise and Rewrite the Research Question

What is the association between 9/11/01 and the future plans of high school seniors?
Revise and Rewrite the Purpose Statement

The purpose of this study is to explore the association between 9/11/01 and future plans of high school seniors.

Example

Research Question:
What effects did 9/11/01 have on the future plans of students who were high school seniors when the World Trade Centers were destroyed?

Revised Question:
What is the association between 9/11/01 and the future plans of high school seniors?

Example

Purpose Question:
The purpose of this study is to determine the effects of the 9/11/01 attack on the future plans of high school seniors

Revised Question:
The purpose of this study is to explore the association between 9/11/01 and future plans of high school seniors.

Expand Your Research Question

• What is the relationship between 9/11/01 and enlisting in the military?
• Possible variables to include
  • Demographics (gender/age/ethnicity/religious preference)
  • Geographic location
  • Parent’s educational level
  • Role of parent
  • Student’s/parent political affiliation
### Other Examples

**Possible Question:** Why are social networking sites harmful?

**REVISED Question:** How are online users experiencing or addressing privacy issues on Facebook and Twitter?

**Possible Question:** Are females healthier than males?

**REVISED Question:** Are females aged 18 years to 35 years experiencing higher physical and mental health functioning compared to males on the SF-12 (standardized health questionnaire)?

### Formulate Research Question

- What is already known about this subject?
- What are you interested in finding out?
- Whom do you want to study?
- What do you expect to learn and why?
BEFORE You Write Any Questions

You must understand:

- The survey purpose (your research question)
- The nature of the respondents (your population)

Target Population

- Who do you want to hear from?
- Do you want to reach everyone or subset?

Using Your Research Question

Your research question will help you identify & describe the population
For Example:

- If your objective is:

  Find out what pediatric equipment is on board an ambulance

Who is involved in identifying the equipment on an ambulance?

- State Agencies
- Local Agencies
- Agency Manager
- Agency Ambulance Inspector

All or some of these could be your target population...

What is Inclusion/Exclusion?

- Inclusion
  - Eligible to take the survey
- Exclusion
  - Criteria to rule out certain people from the inclusion group
Why Inclusion/Exclusion?
Helps to Establish Clear & Definite Eligibility Criteria

Inclusion and exclusion criteria are characteristics a person must have in order to be eligible for participation in the survey.

Inclusion/Exclusion Example
If your research question is:
*Where do new parents learn to properly secure their child’s car seat into their vehicle?*
What characteristics must a person have to be eligible for your study?

Some Inclusion/Exclusion Ideas
- Age
- Gender
- Ethnicity
- Geography
  - Rural or Urban
  - County or City
- Education Level
- Agency Type
- Other relevant characteristics of your respondents

Sampling Frame
Sampling Frame

- A physical representation of your population
  - A list of all the EMS agencies in your state that you need to survey
- The list = sampling frame
  - Accurate information that can be used to contact selected individuals

Sampling Frame Example

- The target population for your survey is new parents in your city
- Where can you get this information?

More on sampling frames

- Not everyone in your population is going to be listed in your sampling frame
- May exclude people you did not want to
- May be the best you can do...
  - Every research project has limitations

Survey Modes

- Which mode to use?
Survey Modes for Research

• Self-Completion Questionnaires
  • Web-based
  • Paper
• Telephone Interviews
• Mixed-mode

Self-Completion Questionnaires
The most common form of survey research

Self-Completion Questionnaires

• Web-based
• Paper

Self-Completion Method Considerations...

• Questionnaire length - shorter = better response rate
• Clean & easy to read formatting
• Simple questions
  • No explanation needed
• Sensitive Issues
### Pros & Cons: Web-based

**General Description:**
Web-based survey which is designed & completed online

**Pros**
- Negligible distribution costs
- Preprogram question order / context
- Required questions
- Link to additional explanation
- Data automatically entered in database
- Automatic programming - branching, piping, & skipping
- Automatic Reminder, Thank You, Spell Check, & Math
- Easy Pilot Testing

**Cons**
- Up to date email list
- Technical knowledge in-house vs. respondent
- Security & Confidentiality
- Use different media types
- Export or back-up data

**COSTS:**
- Hosting & Software
- Programmer
- Reliable Internet Access / Reliable system
- Technical Expertise
- Limiting the Population
- Must be able to use a computer, a mouse, and/or keyboard

### Pros & Cons: Mailed Questionnaire

**General Description:**
Paper & pencil survey, sent in the mail; completed individually

**Pros**
- Large geographical area
- Highest response rates
- Complete it anywhere/anytime
- Sensitive issue

**Cons**
- No clarification
- Data entry
- Respondents must be able to read, see, & write
- No way to require questions

**Considerations**
- Up-to-date address list
- Visual cues

**COSTS:**
- Follow-up mailings
- Printing, paper, envelopes
- Stamps
- Incentives

### Telephone Interview

I'm not interested, thank you
Pros & Cons: Telephone Interview

General Description:
Conduct interviews over the telephone with scripted questions & prompts

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Explore options with respondents</td>
<td>-Non-response may be high</td>
<td>-Current phone #s</td>
</tr>
<tr>
<td>-Assist with words or questions</td>
<td>-Need trained interviewers</td>
<td>-Need a schedule</td>
</tr>
<tr>
<td></td>
<td>-Phone culture has changed</td>
<td>-Training</td>
</tr>
<tr>
<td></td>
<td>-Is the respondent reachable by phone?</td>
<td>-Telephone Charges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Computer &amp; Technical Expertise</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Incentives</td>
</tr>
</tbody>
</table>

Remember: Survey = Systematic data collection

- Helps ensure consistency
- May be more than one person making calls

Example

Script

Overview and Consent
First of all, I want to thank you for participating in our study. My name is ________, I’ll be conducting this study and (if note-taker is present) ______ will be taking some notes. Our goal is to find out whether people can find the information they want in a web site for our college.

Your participation in this study is completely voluntary. Also, your name won’t be part of any of our notes. This session should take approximately fifteen minutes to a half hour. However, if you decide you are not comfortable completing the tasks, you may stop at any time.

Do you have any questions?

*Answer any questions*

Alright, let’s get started.

Phone Script is Essential

Mixed-mode
Combining more than one method
What is Mixed-mode?
Using one survey instrument with two or more data collection modes

For example: gathering data via paper/pencil and the web

Why Mixed-mode?
Widens reach of the strengths of each method used and may level out weaknesses

Useful if your target audience diverse & different modes are optimal

Considerations for Mixed-mode
• Start w/ least expensive mode and follow w/ more expensive
• Make sure each response mode collects equivalent data

Choosing a Mode
How do I know which method?
Choose the survey method that is best for your audience and research question

How do I know what method?
• Review pros & cons slides
• Use focus groups or pilot testing
• Consider resources are available to you
• What you’d like to do versus what you have time to do
• How will the data be analyzed?
• Consider costs

Resources
• Books
  • Arlene Fink, “How to Conduct Surveys”, 3rd Edition
  • Arlene Fink, “The Survey Kit”
  • Alan Aldridge; Kevin Levine, “Surveying the Social World: Principles and practice in survey research”
  • Janet Harkness, “Cross Cultural Survey Methods”
• Free download to improve survey literacy [www.whatisasurvey.info](http://www.whatisasurvey.info) (American Statistical Association)

Questions?
The Importance of Careful Question Writing

Careful Question Writing is Key
• The way you ask a question shapes the answers you will get
• It’s very easy to unintentionally bias responses
  • Bias: to cause an inclination for or against certain responses
• Poor question writing can also cause imprecise responses

Day 1
• Introduction to Survey Research
• What is Your Research Question?
• Identifying Your Target Audience & Survey Modes
• Writing Survey Questions
• Putting the Survey Instrument Together
Write Questions With Your Respondent in Mind

Aim to:

Maximize Benefits

Minimize Burdens

Reducing Burden

• Keep questions easy to understand
• Make them simple to answer
• Be specific about what you want
• Provide clear instructions

Maximizing Benefits

• Ask *interesting* questions
• Try to make the survey *easy and enjoyable* to complete

Second Key Principle to Consider When Writing Questions:

• Make sure your survey questions match your research goals
• The survey questions must collect the information you need in order to answer your *research* questions
The Components of a Question

Components of a Survey Question

1. **Question stem**: the words that form the actual query itself:

   In what month and year were you born? Please report your answer in a MM/YYYY format.

Components of a Survey Question

2. **Answer spaces or choices**: where respondents indicate their response to the question stem:

   In what month and year were you born? Please report your answer in a MM/YYYY format.

Components of a Survey Question

3. **Additional instructions**: definitions or examples to help people understand the question, OR, directions to explain how to respond

   In what month and year were you born? **Please report your answer in a MM/YYYY format.**
Using Previously-Written Questions

Many Survey Questions Already Exist

• When setting out to write your survey, first look for already written surveys that have questions you’d like to ask
• No need to “reinvent the wheel” when it comes to frequently-asked questions
  • For example, demographics

But, Use Existing Questions with Caution

• Just because a question worked well for someone else, doesn’t mean it works for you
• You must always evaluate prior questions in relation to your goals and your particular population
• If not able to use prior questions exactly as written, you may still find them useful as a template for creating a question that fits your survey

Some Examples of Sources of Existing Questions:

• Large, respected survey research organizations
  • Pew Research Center, Gallup Poll, General Social Survey
• Existing Health Surveys
  • Behavior Risk Factors Surveillance System, National Health Interview Study
• Question Banks
  • Qbank, Health Measures Inventory
• General internet searches
  • But may want to verify the sources are reputable
Guidelines for Writing Your Own Questions

Going Back to the Beginning...
• The way you ask a question shapes the answers you will get
• These guidelines are designed to help avoid bias and ensure precision

General Guidelines for Writing Questions
1. Don’t ask more than one question at a time
   • A problematic example:

   Have you completed your medical internship and residency?
   ○ Yes
   ○ No

General Guidelines for Writing Questions
2. Make sure all questions apply to every person asked to respond
Example: Question That Does Not Apply to Everyone

What brand of smartphone do you own?
- iPhone
- Samsung
- Other, please specify: ______

Some Guidelines for Writing Open-Ended Questions

Examples of Open-Ended Questions

6. Approximately how many 911 calls (both adult and pediatric) did your EMS agency respond to in the last year?
   (Numeric data only, e.g., 5000, not “five thousand”)
   __________

   In your opinion, what are the top three vacation spots in the U.S.?

   1. __________
   2. __________
   3. __________

   If you have any thoughts about how this survey workshop could be improved, please share them here:

Open-Ended Questions

• Pros:
  • Good for collecting detailed responses
  • Helpful when not much is known about how people will respond
  • Useful when you think answer categories might bias responses

• Cons:
  • Hard to analyze
  • Respondents are more likely to skip them because they require more effort
### Writing Open-Ended Questions

1. Be specific about what kind/type of response you want as you ask the question

**Example: Going from Vague to Specific**

- A vague question:
  
  When did you begin working for your current employer?

- A more specific alternative:
  
  What month and year did you begin working for your current employer? **MM/YYYY**

### Writing Open-Ended Questions

2. Use open-ended questions sparingly
   - They require more effort and are more likely to be skipped by respondents

### Writing Open-Ended Questions

3. Provide extra motivation to respond for particularly important free response questions
   - But, this must be used sparingly or it becomes less effective
Example of Motivating Request
What types of support or resources would help you be better prepared to deal with difficult cases? Any ideas you have will be very helpful for us to determine how to better support providers.

Some Guidelines for Writing Closed-Ended Questions

Examples of Ordered Scale Response Options
- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree
- Poor
- Fair
- Good
- Excellent
- Less than $25
- $26 to $50
- $51 to $75
- $76 to $100
- Greater than $100

Non-Ordered Closed-Ended Questions
What is your favorite fruit?
- Apples
- Peaches
- Strawberries
- Grapes
- Other, please specify: _______
Closed-Ended Questions

- Pros
  - Easy to analyze
  - Easier for respondents to answer
- Cons
  - Harder to write—you need to know all the answer categories to include!
  - Can be difficult to include a full list of all possible responses—if incomplete, some respondents won’t be able to answer
  - Can sometimes lack the nuance that detailed, open-ended responses provide

Writing Closed-Ended Questions

1. Make sure your list of answer choices includes all possible answers so everyone will be able to provide an accurate response

A Problematic Example:

Where did you hear about the open position at our hospital?
  - Online job posting
  - A poster in the hospital waiting room

If In Doubt, Consider an “Other” Category

- If you’re not entirely sure your list of answers is all inclusive, consider adding an “other” or “something else” category
- These are often followed by an option to specify the response:
  - Other, please specify: _______
Writing Closed-Ended Questions

2. Make sure your answer categories don’t overlap, and are mutually exclusive.

Example of overlapping categories:
What is your age?
- 18-40
- 40-60
- 60-80
- 80 or above

Example: Answer Choices are Not Mutually Exclusive

How did you first hear about last week’s Tornado?
- From someone at work
- On TV
- The radio
- Before leaving home for work
- While driving to work

Writing Closed-Ended Questions

3. Avoid complex response tasks
   • Some examples:
     • Asking people to rank a long list of items from most favorite to least
     • Requiring people to manually sum up numerical responses

Writing Closed-Ended Questions

4. Understand the cons of using a check-all-that-apply question
   • Research shows that people tend to select from the top of the list, and ignore the rest
   • They aren’t fully considering all of the other options
The Check-All-That-Apply Format—An Example:
Which of the following factors influenced your decision to not attend last month’s conference? Check all that apply.

- Was not interested in the topics
- Already attended a conference this year
- Did not have funding
- Had previously scheduled plans during the time of the conference
- Did not care for the conference location
- Other

The Forced Choice Format: An Alternative to Check-All
Did any of the following factors influence your decision to not attend last month’s conference? Please mark yes or no for each.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was not interested in the topics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Already attended a conference this year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not have funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had previously scheduled plans during the time of the conference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not care for the conference location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A Caveat for Using Forced-Choice
• If it is a very long list of items, respondents may see the task as too time-consuming and skip the entire question
• So try to keep lists short and manageable
  • Perhaps need to separate long lists into multiple questions

Writing Closed-Ended Questions
5. Avoid bias in question wording
  • Bias can occur in numerous ways
Can You Spot the Subtle Bias in the Wording of These Question Stems?

How satisfied are you with your internet service provider?
- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

Do you favor the law requiring seat belt use among all car passengers?
- Favor
- Oppose

Avoid Bias by Giving Equal Attention to Both Sides of a Response Scale

If asking an either/or question, state both sides of the response scale in the question stem. For example:
- How satisfied or dissatisfied are you...
- Do you favor or oppose...
- To what extent do you agree or disagree with the following statements...

- Stating only one side sublety suggests the answer “should” align with that side

Can You Spot the Bias in This Question Stem?

How familiar are you with the hospital’s Standards of Care, which all providers in your position are required to know?

Avoid Bias by Removing Suggestive Language

- Sometimes questions imply that respondents “should” answer in a particular way and feel shame if they don’t. Avoid this:

  How familiar are you with the hospital’s Standards of Care, which all providers in your position are required to know?
Some Guidelines for Ordered Scale Questions
• The next set of guidelines are specifically for questions with an ordered scale of responses

Writing Ordered Questions
1. Choose either a unipolar or bipolar scale, and avoid a mixture of the two

Unipolar and Bipolar Scales
• Unipolar: a scale that has only one direction or dimension
  • The “zero point” is at one end of the scale
• Bipolar: a scale that has two directions or dimensions
  • The “zero point” is in the middle of the scale

Examples of Uni- and Bipolar Scales
• Unipolar scale of satisfaction:
  o Not at all satisfied
  o Somewhat satisfied
  o Mostly satisfied
  o Completely satisfied
• Bipolar scale of satisfaction AND dissatisfaction
  o Very dissatisfied
  o Somewhat dissatisfied
  o Neither satisfied or dissatisfied
  o Somewhat satisfied
  o Very satisfied
Common Mistake: Combining Unipolar and Bipolar Together

• For example:
  - Very important
  - Somewhat important
  - Somewhat unimportant
  - Not at all important

Two Options for Fixing It

Unipolar:
- Very important
- Somewhat important
- Not at all important

Bipolar:
- Very important
- Somewhat important
- Somewhat unimportant
- Very unimportant

Should Bipolar Scales Have a Midpoint (Neutral) Category?

Midpoint included:
- Very important
- Somewhat important
- Neither important nor unimportant
- Somewhat unimportant
- Very unimportant

No midpoint:
- Very important
- Somewhat important
- Somewhat unimportant
- Very unimportant

Midpoint or Not?

• It depends on what makes sense for your question and survey respondents

  • Will some people legitimately feel neutral on a topic? If yes, use it
  
  • Or will adding a midpoint just be an “easy out” for not sharing an opinion? If so, skip it
Midpoint is Different from Non-substantive Response

- **Midpoint**: When a person’s response falls in between two dimensions of a concept
- **Non-substantive response option**: When a person has no answer, or does not know their answer
  - Include options such as: “don’t know,” or “not sure”.
  - These should be at the end of list of categories, not the middle

Writing Ordered Questions

2. Choose an appropriate scale length and make sure all options are meaningful

- In general, 4 to 5 categories are usually sufficient

Comparison of 5 and 7 Point Bipolar Scales

<table>
<thead>
<tr>
<th>Very likely</th>
<th>Very likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat likely</td>
<td>Somewhat likely</td>
</tr>
<tr>
<td>Neither likely nor unlikely</td>
<td>Slightly likely</td>
</tr>
<tr>
<td>Somewhat unlikely</td>
<td>Neither likely nor unlikely</td>
</tr>
<tr>
<td>Very unlikely</td>
<td>Slightly unlikely</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Very unlikely</th>
<th>Slightly unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat unlikely</td>
<td>Somewhat unlikely</td>
</tr>
<tr>
<td>Very unlikely</td>
<td>Very unlikely</td>
</tr>
</tbody>
</table>

Comparison of 4 and 5 Point Unipolar Scales

<table>
<thead>
<tr>
<th>Very successful</th>
<th>Completely successful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat successful</td>
<td>Very successful</td>
</tr>
<tr>
<td>Slightly successful</td>
<td>Somewhat successful</td>
</tr>
<tr>
<td>Not at all successful</td>
<td>Slightly successful</td>
</tr>
</tbody>
</table>

| Not at all successful | Not at all successful |
Writing Ordered Questions

3. Provide balanced scales where categories are relatively equal distances apart

Consider this Question:
What do you think we should do to the agency’s continuing education budget?
- Increase it
- Keep it the same
- Decrease it a little
- Decrease it some
- Decrease it a lot

Balancing the Scale and Evening the Distance

What do you think we should do to the agency’s continuing education budget?

<table>
<thead>
<tr>
<th>Unbalanced scale with uneven distance between categories:</th>
<th>Balanced scale with more even distance between categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase it</td>
<td>Increase it a lot</td>
</tr>
<tr>
<td>Keep it the same</td>
<td>Increase it a little</td>
</tr>
<tr>
<td>Decrease it a little</td>
<td>Keep it the same</td>
</tr>
<tr>
<td>Decrease it some</td>
<td>Decrease it a little</td>
</tr>
<tr>
<td>Decrease it a lot</td>
<td>Decrease it a lot</td>
</tr>
</tbody>
</table>

Writing Ordered Questions

4. Whenever possible, choose labels specific to the concept that’s being asked about, rather than generic scales such as agree/disagree and satisfied/unsatisfied

- Being specific makes response task easier and more straightforward
Generic Scale

- Construct of interest: perceived approachability of one’s supervisor

To what extent do you agree or disagree that your boss is approachable?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Moving to a Construct-Specific Scale

- Construct of interest: perceived approachability of one’s supervisor

To what extent do you agree or disagree that your boss is approachable?

- How approachable is your boss?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Writing Ordered Questions

5. Make sure the range of responses provided is a reasonable distribution for the population being surveyed

A Problematic Example

- When surveying a population of millionaires, what would be the problem with this question:

What is your annual household income?

- Less than $30,000
- $30,000-$49,999
- $50,000-$69,999
- $70,000-$89,999
- $90,000 or more
Writing ordered Questions

6. Use a fully-labeled scale where all answer categories have a meaning attached to them

Example of Only Labeling End Points

- Very satisfied
- 
- 
- Very dissatisfied

- In this example, the three middle categories don’t have meaning attached to them.
- This leaves them up to interpretation, causing variation in how people respond

After Drafting Survey Questions:

- Think about what each question will help you learn, and make sure this information is relevant to your research questions
- If it’s not necessary, consider deleting it

Can You Apply Some of These Guidelines to Your Own Questions?
Day 1

- Introduction to Survey Research
- What is your Research Question?
- Identifying Your Target Audience/Survey Modes
- Writing Survey Questions

- Putting The Survey Instrument Together

---

**Not all examples taken from surveys used in this presentation represent good or appropriate survey methods**

---

**#1**

**Thing to keep in mind**
No matter which mode you decide to use . . .

Always start with a paper version

Use the paper version

- To build & visualize the online version
- As the script for your telephone or in-person interview script

Telephone Script Example

**Telephone Script Example**

**Telephone Script Example**

**Telephone Script Example**

©NEDARC * www.nedarc.org

75

10/04/16

Techniques in Developing a Survey
And of course
If you use the paper mode, you will need it as well.

7 Steps for Organizing Your Survey Instrument

Step 1
Grouping related questions that cover similar topics together

Grouping related questions makes it easy for respondents.

Grouping related questions

I’m Professional!

Step 2
Begin with questions likely to be applicable to all respondents

• Convinces people to respond
• Reduces likelihood respondents will quit

Recent hotel stay example

Choosing the right 1st question

Strongly influences people to respond

Respondents can’t flip through all questions like on a paper survey

Is important for web surveys
Non-demographic 1st Question Example

1. **What Tribal Department or Division oversees your EMS service? (Check all that apply)**
   - [ ] Health
   - [ ] Public Safety
   - [ ] Emergency Management
   - [ ] Other (Please describe)

   ____________________________________________________________

What to avoid in a 1st question

- Long
- Boring
- Difficult to understand
- Tedious to answer
- Potentially embarrassing

Put sensitive questions near the end

- Respondents by this time are engaged in your survey
- Respondents have already invested time
- You’ve established rapport
- Avoids interrupting the flow
Pre-testing can help identify sensitive questions.

Step 4

Ask filter questions before follow-up ones

Filter question example

Follow-up question example

In web surveys
Ask all your filter questions together as a group before the follow-up questions to avoid “motivated underreporting”
**In paper surveys**

Don’t group your filter questions because it complicates the skips.

**Step 5**

Remember the question groups you made in Step 1?

---

**Have conversational language between sections**

**Conversational Language**

Use the language of your audience.
What does that mean?

Use words & phrasing in a conversational way

Conversational Language

Welcomes your potential respondents

Paper Version: Cover Letter

Web Version: Welcome Page
Confidential vs Anonymous

CONFIDENTIAL
• Don’t report responses with respondent name
• Good if need to track or follow-up

ANONYMOUS
• Don’t know whose response it is
• Good if tracking not important

Conversational Language
also gives respondents some background and instructions

Pedsready Survey Example

The following assessment questions refer to personnel, quality improvement, and patient safety in the ED. If you have a separate pediatric ED, then answer based on resources for that area. If you do not have a separate pediatric ED, then answer based on the overall ED resources.

15. Thinking of the physicians who currently staff your ED and care for children, what types of training are represented? (Check Yes or No for each)

- a. Emergency medicine board eligible/certified
- b. Family medicine board eligible/certified
- c. Pediatrics board eligible/certified
- d. Pediatric emergency medicine board eligible/certified
- e. Physician with other training

Let respondents know why they are being asked something
Keys respondents to a change in how to answer questions

No matter which survey mode you use

Always include conversational language

Step 6

Testing QUESTIONS

SURVEY INSTRUMENT
Testing

• Often reveals unexpected problems

• Diagnose & fix problems before launch

When to Test?

- Writing Survey Questions
- Putting the Survey Instrument Together
- Building the Web Version
- Implementation

Step 7

Feedback From Experts for

- Content
- Analysis
Content & Analysis Feedback Examples

• Is the language appropriate?
• Does the survey actually measure the intended concepts?
• Are response options biased?

General Guidelines for the Visual Presentation
Questions & Response Options

**QUESTIONS**
- Darker & Larger

**RESPONSE OPTIONS**
- Lighter & Smaller

12. If yes, is there a job description or written list of responsibilities for this physician coordinator?

- Yes
- No

13. If yes, is there a job description or written list of responsibilities for this physician coordinator?

- Yes
- No
White Space Between Questions & Sections

**Yes**

- If yes, there is a job description or written list of responsibilities for the position?
- No

**No**

- There is no job description or written list of responsibilities for the position?
- No

---

**CONSISTENCY**

**Consistent**

- Font style
- Font sizes
- Spacing between lines
- Alignment

---

**ODPOTJUFOUGPOUTUZMFTBOETJFTQBDJOHCFUXFFOMJOFT**

©NEDARC * www.nedarc.org
Integrate Special Instructions into the question

How many of your ALS ground transporting vehicles carry:

<table>
<thead>
<tr>
<th>Number of vehicles</th>
<th>Most common</th>
<th>Next common</th>
</tr>
</thead>
<tbody>
<tr>
<td>at least 2 5.0mm endotracheal tubes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least 2 5.0mm endotracheal tubes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least 2 5.0mm endotracheal tubes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Visual Considerations for Open-ended Questions

For paper and web

Provide a single answer box if only one answer is needed

Provide multiple answer boxes if multiple answers are needed

21. What resources would help you address the cultural needs of your patients?

10. What is the name of your agency?
Encourage use of proper units or a desired response format

3. "What is your annual call volume?"
   (Please approximate if you do not know the exact answer)
   If you do not have an estimate, please enter "NA" in the space provided.

Visual Considerations for Close-ended Questions
For paper and web

Align response options vertically in one column or horizontally in one row

Place Nonsubstantive Options After Substantive
Place Nonsubstantive Options After Substantive

- Nonsubstance Response Option Examples
  - Not Sure
  - Don’t Know
  - No Opinion
  - Not Applicable (N/A)

Nonsubstantive Placement Example

7. How comfortable are you when treating a pediatric patient?
   - Definitely NOT Comfortable
   - NOT Comfortable
   - Not Sure
   - Comfortable
   - Definitely Comfortable

Visual Considerations for Survey Instrument Pages or Screens

For paper and web
Use a Style Guide

- Visual presentation of questions
- Alignment & vertical spacing

Use color & contrast to help respondents navigate through the survey.

Improved navigation of the survey

Paper Survey & Telephone Script use arrows to help respondents:
- Use a consistent visual presentation of questions.
- Align questions and maintain consistent vertical spacing.

Web surveys, use conditions and branching rules to help respondents:
- Use color and contrast to guide respondents through the survey.
- Implement navigation using conditions and branching rules.

Conditions:
- [Radio Button] Yes
- [Radio Button] No
Visually group related information in sections through the use of contrast & enclosure

**Paper**

Please provide us with the following information in order we need to contact you or help you of your response.

- Name:
- Title/Position:
- Phone number:
- Email:

Please provide questions related to the infrastructure of your hospital's emergency department.

1. What is the name of your hospital?
2. In what city is your hospital located?
3. What is the size of your hospital?
4. Does your hospital have an emergency department (ED) but no emergency?

**Avoid placing questions side-by-side on a page**

**Techniques in Developing a Survey**

- **DEMOGRAPHICS**
  1. What year did you first become licensed to practice medicine?
  2. What is your certification level?
    - MD/DO
    - NP/PA
    - Pharmacist
  3. Have you ever been certified as an emergency physician?

- **FACILITY EQUIPMENT**
  6. If your facility is unable to provide care, what is the next step you take?
    - Yes
    - No

©NEDARC * www.nedarc.org

©NEDARC * www.nedarc.org

10/04/16

93

©NEDARC * www.nedarc.org

If you have to use a matrix, make it as simple as possible.
4 Different Web-Based Platforms

- SurveyMonkey
- Google Forms
- SurveyGizmo
- QuestionPro

List of the things that I am looking for

- Ownership/ Confidentiality
- Number of Surveys you can build
- Number of Respondents /Responses
- Mobile
- Export
Techniques in Developing a Survey

Welcome! Let’s get started

It’s quick and easy to create surveys and get answers.

Who will be taking your survey?
- Patients or healthcare workers
- Staff
- Students, parents or faculty
- Family and friends
- We are yet, I want to take survey for charity

Continue →

Google Form

Untitled Question

QuestionPro

Welcome! Creating your first survey is easy as 1, 2, 3.
SurveyMonkey Data Agreement

Your survey data is owned by you. Not only that, but SurveyMonkey treats your surveys as if they were private (except if you have made the surveys available via a public link). We don’t sell them to anyone and we don’t use the survey responses you collect for purposes unrelated to you or our services, except in a limited set of circumstances (e.g. if we are compelled by a subpoena, or if you’ve given us permission to do so).

Google Doc Data Agreement

Your Content in our Services: When you upload or otherwise submit content to our Services, you give Google (and those we work with) a worldwide license to use, host, store, reproduce, modify, create derivative works (such as those resulting from translations, adaptations or other changes that we make so that your content works better with our Services), communicate, publish, publicly perform, publicly display and distribute such content.

SurveyGizmo Data Agreement

Your survey data is owned by you. Your surveys are private, and your data is yours. You control your data; how you release it or use it is up to you. We don’t sell your information to anyone and we don’t use the survey responses you collect for any purpose other than to provide service to you. But we do comply with the law, so under limited circumstances we could be asked to release your information (e.g., if we are compelled by a subpoena).

QuestionPro Data Agreement

Thank you for taking the time to call

It's a little weird that you have my number.

Thank you for your time today, it was nice speaking to you.
<table>
<thead>
<tr>
<th>Ownership</th>
<th>Survey Monkey</th>
<th>Google Forms</th>
<th>Survey Gizmo</th>
<th>Question Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Surveys you can build</td>
<td>100</td>
<td>UNLIMITED</td>
<td>UNLIMITED</td>
<td>1</td>
</tr>
<tr>
<td>Number of Responses</td>
<td>100</td>
<td>UNLIMITED</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Mobile Device</td>
<td>YES</td>
<td>YES</td>
<td>PAID VERSION</td>
<td>YES</td>
</tr>
<tr>
<td>Exported</td>
<td>Multi</td>
<td>GOOGLE DOC</td>
<td>CVS</td>
<td>Uneditable Charts/Tables</td>
</tr>
<tr>
<td>Number of Questions</td>
<td>10</td>
<td>UNLIMITED</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Where do I begin?

Now it's your turn.
6 Types of Questions
• Single line (fill in the blank)
• Multiple line (fill in the blank)
• Single answer
• Multiple Choice
• Likert scale
• Rating scale

Survey Question Handout
1. What is your name? ___________________________ (Type: Single Line Fill in the blank)

2. What are some reasons that you started working in EMS?
   This question is important to help us understand possible recruitment of future EMT’s:
   ________________________________________________
   ________________________________________________
   ________________________________________________ (Type: Multiple line fill in the blank)

3. What is your highest EMS certification? (Choose one)
   • EMR
   • EMT
   • A-EMT
   • Paramedic
   • Critical Care Paramedic

Report Back!
• Were you able to use each of the 6 question types?
• Could you take the survey on your phone /tablet?
• How were you able to export the data?

and now it's time for something completely different

©NEDARC * www.nedarc.org
Techniques in Developing a Survey

Sample Introduction

- Only way to be 100% certain about survey results is to survey everyone in the population

- Not usually possible, so we survey samples of the population
Two key points for your sample

• Who to get the surveys from (Sample Design)

• Number of surveys needed, more is [usually] ALWAYS better (Sample Size)

Sample Design

• A technique used to draw your sample
  • Non-probability
  • Probability

Non-Probability Sampling

• Depends on human judgment
• Not everyone has an equal chance of being selected
• Results cannot be applied to the entire population
When to use non-probability sampling
- Pilot or exploratory study
- Examining a particular trait in population
- Randomization is not possible
- Limited budget, time and workforce

Types of non-probability sampling
- Convenience Sampling
- Quota Sampling

Convenience Sampling
- Most common
- Subjects chosen because of accessibility
- Fast, inexpensive, easy
Probability Sampling

• Depends on laws of chance
• Everyone has a chance of being selected
• Allows results to be applied to entire population

Types of Probability Sampling

• Cluster Random Sampling
• Simple Random Sample
• Stratified Random Sample

Cluster Random Sampling

• Subjects are clustered
• Each cluster is randomly selected
• Random sample or all subjects from each randomly selected cluster
Simple Random Sample

- Each subject has an equal chance of being selected
- Subjects are randomly selected
- Lottery, coin flip, computer aided random selection

Stratified Random Sample

- Subjects are grouped (non-overlapping)
- A random sample is drawn from each group
- Ensures inclusion of group
Basics of Sample Size

• Few surveys are needed for accurate representation
  • For example, in a national survey of U.S. public opinion you would only need just over 1,000 completed surveys to be 95% confident that an estimate from the sample survey is within ±3 percentage points of the true population value.

Calculating Sample Size

• Population Size (Population of USA 324.5 mill)
• Confidence Level (95%)
• Confidence Interval/Margin of Error (±3)

• Online Sample Size Calculators
  • https://www.surveymonkey.com/mp/sample-size-calculator/
  • http://www.surveysystem.com/sscalc.htm
Confidence Level

• How ‘sure’ you can be about survey results
• Most common is 95% confidence level, this means you can be 95% confident or ‘sure’

Confidence Interval

• The plus-minus figure reported in articles or on TV
• Confidence interval of 3 (±3)
• 80% of your 1,000 surveys say strongly agree that seatbelt laws should be strictly enforced
• You can be ‘sure’ that if you had surveyed the entire USA, between 77% (80-3) and 83% (80+3) would have strongly agreed with strict seatbelt law enforcement.
Combining confidence interval and confidence level

We can say we are 95% sure that if we had surveyed all 324.5 million citizens of the USA, between 77%–83% would strongly agree with strict seatbelt law enforcement.

Specifics of sample size vary

• Population size
• Variation expected in answers
• Comparisons between subgroups

EMS Sample Size Example

• You need to survey the EMS agencies in your state about the frequency of their ED protocol review. Your state has 200 agencies.
• How many surveys do you think we need?
EMS Sample Size Example

• 40% of your 5 surveys review ED protocol every 6 months
• You can be 95% sure that between 0% (40-45) and 85% (40+45) of all EMS agencies in your state review ED protocol every 6 months.

Population Size Matters

• 1,068 of 324.5 million is 0.000329%
• 132 of 200 is 66%

Combining Sample Size and Sample Design

• The more the merrier
• Probability sampling is best
  • Simple Random Sample
  • Stratified Random Sample
  • Cluster Sample
Testing

- Often reveals unexpected problems
- Diagnose & fix problems before you launch your survey

When to Test?

- Writing Survey Questions
- Putting the Survey Instrument Together
- Building the Web, Mail or Telephone Version
- Implementation

Testing

There is never enough time to do it right the first time,
but there is always enough time to do it over.

Murphy’s Law
Testing Methods

• Pretesting:
  • Question and final survey

• Pilot studies:
  • Implementation procedures

Pretest

• Help you to find out if questions are sensible and meaningful to respondents.

• Identify problems that may exist with the questionnaire as a whole including difficulty with navigation, instructions, and time.

Pilot Studies

• Help you to find out about using the survey with special populations.

• Test initial contact and follow-up procedures.

• Help with ensuring that data preparation procedures for coding and computerizing your data are adequate.
Pretest
Cognitive Techniques
• Think out loud
• Laboratory and field
• Behavior coding
• Other techniques

Think Out Loud
Find out the cognitive processes that respondents use to approach the question and finding the evidence to respond to the question

Cognitive Interview
Cognitive Interview: Example

Laboratory/ Field Behavior Coding

Pretesting
- Important
- Balance costs with knowledge gain
- Ideas on how you can use it?

Testing QUESTIONS

SURVEY INSTRUMENT
Pilot Studies
Trial run to test
1. Data collection procedures
2. Data Preparation
3. Survey

Trial Run
• Implement all the initial contact and follow-up procedures
• Send the final survey to potential respondents
• Evaluate the results

Surprise!
1. Refine notification procedures
2. Provide cash incentives
3. Redesign the introduction to the web-based survey
4. Check out data collection and coding

PILOT TESTING
### Report for Q2APR12

Reflects results through Week 11 of 12

<table>
<thead>
<tr>
<th></th>
<th>Week 10</th>
<th>Week 11</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative number of completed surveys</td>
<td>189.0</td>
<td>202.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Response Rate (%)</td>
<td>56.4</td>
<td>60.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Average time (IN HOURS) to complete survey</td>
<td>108.5</td>
<td>133.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Median time (in minutes) to complete survey</td>
<td>44.6</td>
<td>44.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Number of surveys completed in under 60 minutes</td>
<td>102.0</td>
<td>109.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Median time to complete survey of those responses completed in under 60 minutes</td>
<td>22.5</td>
<td>22.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Average readiness score</td>
<td>72.5</td>
<td>72.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Average readiness score for hospitals with low volume</td>
<td>64.7</td>
<td>64.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Average readiness score for hospitals with medium volume</td>
<td>74.2</td>
<td>73.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Average readiness score for hospitals with high volume</td>
<td>79.5</td>
<td>79.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Median readiness score</td>
<td>71.8</td>
<td>70.8</td>
<td>-1.0</td>
</tr>
<tr>
<td>Number of hospitals with perfect readiness score</td>
<td>6.0</td>
<td>6.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Minimum readiness score</td>
<td>33.8</td>
<td>33.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Number of surveys started but not completed</td>
<td>25.0</td>
<td>26.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Number of surveys started but not completed and inactive at least 7 days</td>
<td>22.0</td>
<td>23.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

### Survey questions (147 incomplete surveys so far)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Q1. Hospital</td>
<td>27</td>
<td>20</td>
<td>25</td>
<td>23</td>
<td>21</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>Q6. EDConfig</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>23</td>
<td>Q.10 AgeTrauma</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>21</td>
<td>Q.11 PrevEDPatients</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>20</td>
<td>Q.12 TotalEDPatients</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>Q.13 NotGuardsAware</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>Q.14 JtJrnr_Personnel_YN</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Q.15 PhysCoord</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Q.22 NurseCoord</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Q.33 MidPrac</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Q.37 QIProcess</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Q.39 SafetyKits</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Q.46 Triage</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Q.51 Guideline</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Q.58 MedEquip_BPCoffNeo_YN</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Q.59 ResEquip_Cath22_YN</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Q.60a AirEquip_ET135_YN</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Q.60b AirEquip_AirKitPed_YN</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

---

### As written for pilot...

- **How to avoid high drop-out rate at this point?**

Please provide actual data or estimation of ED patient volumes for the following:

1. List the number of patients who were in your ED in the last year.
   - [ ] Number of patients (in thousands)
2. List the number of patients who were in your ED in the last year.
   - [ ] Number of patients (in thousands)
Include notification that this information will be needed with assessment pre-notice

“Prior to starting the online survey, it may be useful to collect the information that will be asked. You will need the number of pediatric patients and the total number of patients seen in your ED in the last year. You may use the following table to record these numbers.”

<table>
<thead>
<tr>
<th>Number of pediatric patients seen in your ED in the last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients (adult and pediatric) seen in your ED in the last year</td>
</tr>
</tbody>
</table>

Possible Options

- Alter the question to be categorical using current volume reporting categories:
  - Low: <3700 pedspatients annually
  - Medium: 3700-7000 pedspatients annually
  - High: >7000 pedspatients annually
- Possible wording:
  “Indicate the volume category that best describes the number of pediatric patients seen in your ED in the last year.”

Final Solution

5A. Estimate the number of pediatric patients (as defined by your hospital) seen in your ED in the last year.
   (Choose one)
   a. Low: <1,000 pediatric patients (average of 5 or fewer a day)
   b. Medium: 1,000 – 4,999 pediatric patients (average of 6-12 a day)
   c. Medium: High: 5,000 – 9,999 pediatric patients (average of 14-20 a day)
   d. High: >=10,000 pediatric patients (average of 27 or more a day)

55. If you know the actual number or a more precise estimate of pediatric patients seen in your ED in the last year, please record below. (Numeric data only, e.g., 598, not “five hundred”)
   Number of Pediatric Patients ________

Testing is worth the time and effort to make sure that your survey goes as planned.
In every questionnaire that we have subjected to testing, the testing has revealed problems that we did not expect.

Oftentimes the solution is a simple change, but had the problem gone undiagnosed and the change not made, the potential for increased error is great.

©NEDARC * www.nedarc.org

Day 2

- Web Survey Software
- Deciding Who to Include in the Sample
- Testing the Survey Instrument
- **Implementing Your Survey**
- Collecting & Preparing Data
The Importance of Survey Implementation

It’s Not Just About The Questionnaire!
- The procedures used to administer your survey matter just as much as its content
- Careful implementation helps produce useful results

Survey Implementation Matters Because it Affects:
- Survey response rate
- How well survey respondents represent the target population

The Big Challenge
- Most people:
  - Don’t want to complete surveys
  - Will ignore requests to participate in a survey
- People are even less likely to respond to surveys these days than in the past
Example: Declining Response Over Time

Utah Behavioral Risk Factors Surveillance System Response Rate Over Time

Why?

• Ideas for why survey response rates have been declining over time?

What This Means for Surveyors

• Surveyors must devote extra effort to get as many responses as possible, from a variety of different people

How Do We Encourage Response?

• Think about the survey request from the respondent’s perspective
• Try to reduce burdens of responding, maximize benefits, and establish trust that the request is legitimate
Selecting a Survey Mode with Your Population in Mind

Survey Mode Matters for Response Rate

- Generally speaking:
  - Telephone and web surveys obtain lower response rates than paper/mail surveys
  - Why might this be?

But, Results Vary Depending Upon the Population

- Web response can be better in a focused population
  - Within an organization, business, etc.
  - Another prior relationship

Response Also Affected by Implementation Methods

- Often implementation strategies used in web surveys are often not as good as mail surveys
  - Improve implementation to improve response to web
Deciding on a Mode

• What makes sense for your population?
• What resources are available?

• Web is often the most feasible option
• The key is to think about delivering it in a way that encourages response

Combining Modes

• Research has developed best methods for mail surveys
• Many surveyors are now applying mail-based techniques to web surveys to improve response
• And using a combination of contact and response modes

Creating Effective Contacts Requesting Response

The Messages You Send Matter

• Your messages are key to “selling” your survey
• Make a good impression: capture attention and get people to consider your request
Making a Good Impression

• Your contact messages must:
  • Convey the legitimacy of the surveyor and the survey
  • Establish trust in the survey

What’s Wrong With This Invitation?

From: Customer Satisfaction <noreply@abcdcorp.com>
To: Me
Subject: Do Not Reply-Order #895712689716_536

Dear Customer,

Our records indicate you recently purchased an item from our website. Thank you for your order.

Tell us how we’re doing! Complete the customer satisfaction survey:

www.abdccorp\customersatis\895712689716_536.html

We hope you will rate us as “Excellent” for every part of your experience.

---------------------------------------------------------------------------

Please do not reply to this email. Any inquiries about your order should be directed to Customer Support at support@abdccorp.com. Please do not contact Customer Support about this survey. This message was sent to you because of your recent purchase from ABDC Corp. By clicking on the survey link, you agree to allow us to contact you via email for future marketing purposes.

You may unsubscribe from the mailing list at any time: UNSUBSCRIBE
Ref no: 895712689716_536.

Some Points to Demonstrate in Your Messages:

• This survey is important
• This person’s help is needed to make the survey a success
• The survey worthwhile for the respondent
• Responding is easy

Methods of Establishing Legitimacy

• Use professional letterhead
• Use sponsorship by respected organization
• Have the message come from someone with authority/respect
• Real blue ink signature (or image of it)
Methods of Establishing Legitimacy

• Provide contact information and encourage people to ask questions
• Include an incentive to participate
• Use real postage stamps

Demonstrate the Survey’s Importance

• Explain how the data will be used for some good
• Stress that you need everyone’s participation to ensure results are accurate
• Try to make this survey stand out as different from every other request they receive

Methods of Personalizing the Messages

• Ideally the survey will come from someone with a good relationship with members of the sample
• Appeal to the person’s affiliation with:
  • The sponsoring organization or individual
  • The subject matter

Methods of Personalizing the Messages

• Use the recipient’s name, if available
  • If not, try to specify some other way
• Avoid mass-produced look
  • Photocopied letters, generic salutations, business reply, resembling marketing materials
Show Respect for Respondents
• Acknowledge the task will take up respondent’s time, but show appreciation for their participation
• Ask for help or advice
  • Avoid coming across as if you are looking down upon people

Highlight the Benefits, Reduce the Costs
• Tell people:
  • How useful their participation will be
  • How you plan to share the results with them
  • How you will protect their confidentiality
• Provide an incentive to participate
• Convey that the survey is short and easy to complete (only if it is!)
• Point out ways you have tried to minimize the burden

A Better Example?

Using Multiple Contacts to Convey Your Message and Increase Response
Multiple Contacts Improve Response
• One of the best ways to increase survey response rates is to use multiple letters/emails

The Approach to Multiple Contacts
• But your added contacts must also be carefully crafted
• The entire set of messages need to work well together to convey all the points we just covered

Make Each Contact Unique
• Each message should be distinct, using a different appeal
• Makes it stand out
• Will help appeal to different people
• Avoid sending a “carbon copy” of an earlier message

Timing of Messages Also Matters
• Need a balance between sending another message too soon and too far out from prior contact
• Emails should be sent early in the morning
• Try to avoid sending messages during very busy times of year, holidays, etc.
A Mail Contact Strategy

• Uses 5 total mailings:
  1. A brief pre-notice letter
  2. The survey invitation letter (with questionnaire)
  3. A short thank you/reminder postcard
  4. A replacement letter (with questionnaire)
  5. A final request letter, ideally using alternate delivery method

Timing of Mailed Messages

Timing is Approximate
1. Pre-notice Day 1
2. Invitation 3-7 days after #1
3. Thank you/reminder 1 week after #2
4. Replacement 2-3 weeks after #3
5. Final request 1 week after #4

A Mixed-Mode Modification that Emphasizes Web Response

1. Day 1: Postal invitation letter with survey website address
2. 3 days later: Email follow-up message with link to survey website
3. 1 week later: Thank you/reminder email with link to website
4. 2 weeks later: A “replacement” postal letter, offering option to respond by paper (paper survey included)
5. 3 days later: Final email follow-up message with link to survey website

Example Timelines from 2010-2011 Performance Measures Survey

<table>
<thead>
<tr>
<th>Date</th>
<th>Web Survey Mode</th>
<th>Paper Survey Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 5, 2010</td>
<td>Survey Invitation email with survey URL &amp; token of appreciation</td>
<td>Survey Invitation letter w/ paper survey, return envelope, &amp; token of appreciation</td>
</tr>
<tr>
<td>May 11, 2010</td>
<td>Thank You &amp; Reminder email with URL</td>
<td>Thank You &amp; Reminder Postcard</td>
</tr>
<tr>
<td>May 26, 2010</td>
<td>Replacement Survey letter with paper survey and return envelope</td>
<td>Replacement Survey email with survey URL (sent in morning) or telephone call</td>
</tr>
<tr>
<td>June 15, 2010</td>
<td>Final contact starts (e.g., telephone call, certified letter, FedEx/UPS)</td>
<td>Final contact starts (e.g., telephone call, certified letter, FedEx/UPS)</td>
</tr>
</tbody>
</table>
Impact of Multiple Contacts in Performance Measures Survey: An Example State

Why Use Postal Contacts for a Web Survey?
• While web response is emphasized, the power of paper is incorporated to boost response
• Has worked very well for improving response rate while collecting a majority of responses via web

Tailoring Multiple Contacts to Your Survey
• The number and type of messages you use can vary
• The idea is to tailor the design of the contact strategy to your particular situation
  • What will work best for your population?
  • What makes sense for the survey?
  • What makes sense for the mode(s) you’re using?
• In most cases a total of 4-5 contacts is optimal

If Possible, Use Multiple Modes of Contact
• Even if responses are only collected using one mode
• Helps switch up the stimuli, so they’re more likely to be noticed
• It may help you appeal to more people
• So, collect multiple types of contact information if you can
With More Info, Many Possible Combinations!

- Postal letters via traditional first class USPS delivery
- Postal letters using Priority Mail
- Postcards
- Various types of envelopes
- FedEx or other specialty mailings
- Phone calls
- Text messages
- Email messages

Using Incentives to Improve Response and Better Represent the Target Population

- A variety of approaches have been used:
  - Respondents entered into a drawing for a prize
  - Respondents given a gift card or cash payment after survey is complete
  - Sending a pre-incentive with the invitation request

Whenever Possible, Use a Pre-Incentive

- A small incentive delivered in advance is the most effective approach
  - In most situations, improves response rate more than post-incentives
  - And improves the representativeness of survey respondents
Using Multiple Modes to Collect Survey Data

Mixing Modes of Response
- We already discussed mixing modes of contact
- You may also consider using multiple modes to collect data

Mixed Mode Surveys
- Increasing numbers of surveyors are using a combo of multiple modes of response to improve survey response and representativeness

Why Use Multiple Modes of Response?
- Some respondents prefer one way over another
- Others may simply find one way more convenient
An Increasingly Common Approach:
• Offer web response first, and then use a paper option later for those who haven’t responded
  • Collects majority of responses on the web, which is cheaper, faster
  • Reserves the more expensive & time consuming mode for reluctant respondents
  • Avoids offering a choice of two at once

Applying Principles of Implementation
Practice crafting an invitation letter

Day 2

- Web Survey Software
- Deciding Who to Include in the Sample
- Testing the Survey Instrument
- Implementing Your Survey
- Collecting & Preparing Data
Plan

- Created prior to any data collection
- Should contain research question
- Mock tables

Research question

- Who
- What
- Where
- Why

Mock Table Examples

<table>
<thead>
<tr>
<th>Race</th>
<th>Gender</th>
<th>Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 to 5</td>
</tr>
<tr>
<td></td>
<td>6 to 8</td>
</tr>
<tr>
<td></td>
<td>9 to 11</td>
</tr>
<tr>
<td></td>
<td>12 to 14</td>
</tr>
<tr>
<td></td>
<td>15 to 17</td>
</tr>
<tr>
<td></td>
<td>18 to 21</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
</tr>
<tr>
<td>More than one</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

Comparing Pediatric Readiness Scores Between Hospital Volume in Children Ages 3 to 8 Years Old

<table>
<thead>
<tr>
<th>Volume</th>
<th>Low (N=xx)</th>
<th>Medium (N=xx)</th>
<th>Medium-High (N=xx)</th>
<th>High (N=xx)</th>
<th>P-value</th>
</tr>
</thead>
</table>

Mock Tables

- Should address each research question
- Appropriate to display data for research question
- Think concretely about data being gathered
- Check previous publications
### Mock Tables

- Include heading
- Identify subgroups
- Reflect transformations
- Indicate research question
- Who, what, where, why

### Mock Table, Demographics

<table>
<thead>
<tr>
<th>Race</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mock Table, Transformation

<table>
<thead>
<tr>
<th>Race</th>
<th>3 to 5</th>
<th>6 to 8</th>
<th>9 to 11</th>
<th>12 to 14</th>
<th>15 to 17</th>
<th>18 to 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than one</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mock Table, Analysis

<table>
<thead>
<tr>
<th>Comparing Pediatric Readiness Scores Between Hospital Volume in Children Ages 3 to 8 Years Old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
</tr>
<tr>
<td>Score</td>
</tr>
</tbody>
</table>

©NEDARC * www.nedarc.org
Collecting Correct Data

• Which variables are needed?

• Where are those variables collected?

Coding Date

• Data Dictionary

• Survey → Data set

Data Dictionary Elements

• Page/Question Number
• Variable Name
• Coded Variable Value
• Variable Description
• Data Type
• Restrictions
Page Number

• Where to find variable in survey

Variable Name

• Informative
• Concise
• Unambiguous
• Similar groupings should have same prefix or suffix

Variable Name Groupings

• Date and time variable
  • ConsentDTM
  • RandomizationDTM
  • EDAAdmissionDTM
  • LabDTM

Variable Name Groupings

11. Thinking of the physicians who currently staff your ED and care for children, what types of training are represented? (Check Yes or No for each)
   a. Emergency medicine board eligible/certified
      Yes ☐ ☐ No ☐ ☐
      PhysTraining, EM, Y/N
   b. Family medicine board eligible/certified
      Yes ☐ ☐ No ☐ ☐
      PhysTraining, Fam, Y/N
   c. Pediatrics board eligible/certified
      Yes ☐ ☐ No ☐ ☐
      PhysTraining, Ped, Y/N
   d. Psychiatry/counseling board eligible/certified
      Yes ☐ ☐ No ☐ ☐
      PhysTraining, Psychiat, Y/N
   e. Physician with other training
      Yes ☐ ☐ No ☐ ☐
      PhysTraining, Other, Y/N

If marked “Other” in the previous question, please classify the other training you consider the physicians who currently staff your ED and care for children have.

PhysTraining, Other, Comments
**Coded Variable Value**

- Coded values of the variable
- Hospital has 24/7 ED
  - 1=Yes
  - 0=No

**Variable Description**

- Definition of the variable
- PhysTraining_EM_YN
  - Physicians are emergency medicine board eligible/certified

**Data Type**

- Continuous vs Categorical
  - Height
  - Weight
  - Blood Pressure
  - Race
  - Eye color

**Checks and Restrictions**

- Is value outside of the range specified?
- Does it align with other variables entered?
### Coding Variables
- Codes for closed-ended questions
- Codes for open-ended questions
- Codes for missing values

### Coding for Closed-Ended Questions
- Assign coded values for each question
- Be consistent when coding
  - 1=Yes
  - 0=No
### Coding for Open-Ended Questions
- Often tested in pilot studies to develop categories
- Consider if question is broad or narrow

### Coding for Missing Data
- Consistency in coding missing elements
  - Refused to answer=90
  - Did not know the answer=92
  - Question was skipped=99

### Spreadsheet Packages
- Excel
- Oracle
- Access

### Cleaning Data
- Detecting and correcting errors during data entry
  - Range checking
  - Contingency checking
### Range Checking
- Verifying that only valid ranges of numbers are coded and entered
- Computer based surveys can have built in checks

### Contingency Checking
- Cross tabulations on related variables
- Computer based surveys can have built in checks

### Anticipation of Analysis
- Descriptive statistics
- Missing values
- Potential outliers

### Conclusion
- Create mock tables
- Run data checks
- Adjust analyses accordingly
Feedback is Important!!

Both for the individual and for the group!

So.....

You want to get your survey results in front of people who have an interest in the subject and/or who can make a difference!
Overview

• Why?
• Who?
• How?
• Other considerations

Why Important?

• Answer research question
• Create awareness
• Promote discussion
• Drive change
• Foster good will
• Show value of all your work!

Driving Change in the ED...

“I am hoping to use the results of this survey to increase awareness of need for pediatric disaster planning, need for improved education, and improve the overall pediatric preparedness of our facility.”
Who do you Share Your Survey Results With?

How Do You Want to Share Results?

It depends, of course, on who your audience is!

Social Media
Visual Media

• Fact sheets
• Infographics
• Video
Infographics and Videos

Let's take a look!

Summary Reports

Publications
Other Considerations

• Honoring confidentiality
• Limitations of results
• Generalizability
• Think about how your results might influence future activities

©NEDARC * www.nedarc.org