

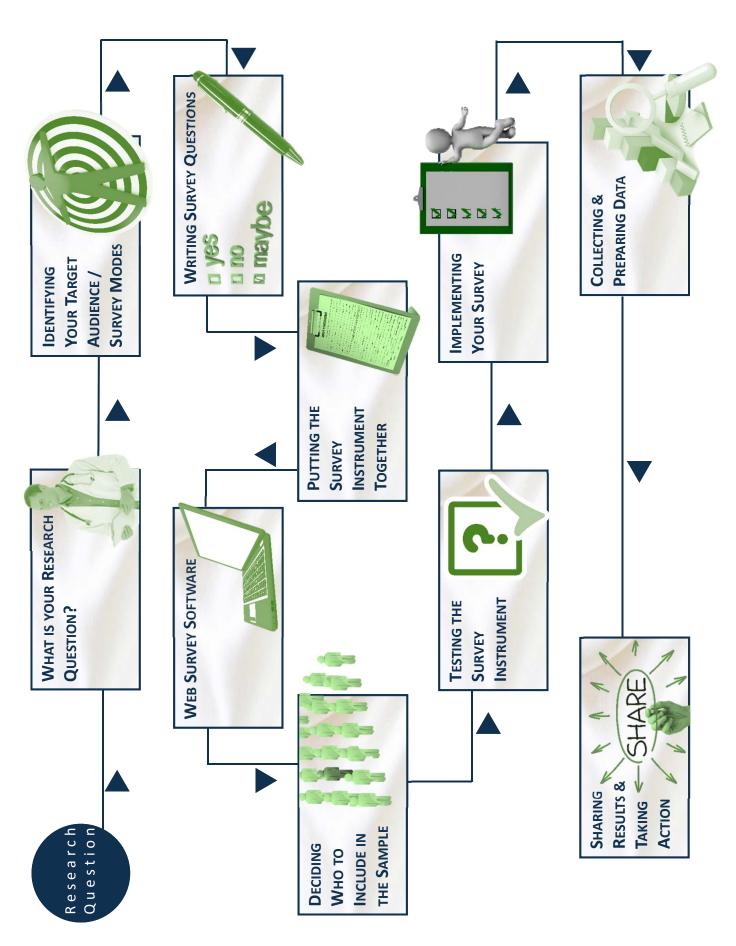
Day 1

Techniques in Developing a Survey

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

Day I		Day 2 - Con	<u></u>
8:30 – 9:15	Welcome and Introduction	3:15 – 3:30	BREAK
9:15 – 9:45	Introduction to Survey Research	3:30 – 4:30	Collecting & Preparing Data
9:45 – 10:00	BREAK		
10:00 – 11:00	What is Your Research Question?	Day 3	
11:00 – 12:00	Identifying Your Target Audience/ Survey Modes	8:30 – 9:45	Drafting Project Survey Questions
12:00 – 1:30	LUNCH ON YOUR OWN	9:45 – 10:30	Sharing Results & Taking Action
1:30 – 3:15	Writing Survey Questions	10:30 – 10:45	BREAK
3:15 – 3:30	BREAK	10:45 – 12:00	Survey Review Activity
3:30 – 5:00	Putting the Survey Instrument Together		
<u>Day 2</u>			
8:30 – 10:15	Web Survey Software		
10:15 – 10:30	BREAK		
10:30 – 11:15	Deciding Who to Include in the Sample		
11:15 – 12:15	Testing the Survey Instrument		
12:15 – 1:45	LUNCH ON YOUR OWN		
1:45 – 3:15	Implementing Your Survey		

Day 2 - cont.



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.

ŕ	is the project you plan on working on?
2) W	hat is Your Research Question?
	e you write your research question, think about the following and jot down a few 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

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.

Draft a purpose statement for your survey

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).
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:

Purpose of Question:
Question Type: (e.g., demographic, attitudinal, factual, etc.)
Question Format: (e.g. multiple choice, text box, etc.)
5
Question on:
Purpose of Question:
Question Type: (e.g., demographic, attitudinal, factual, etc.)
Question Format: (e.g. multiple choice, text box, etc.)
6
Question on:
Purpose of Question:
Question Type: (e.g., demographic, attitudinal, factual, 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.)
10
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)

6)

7)

8)

9)

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)

Second Draft of Questions (cont):

5)

6)

7)

9)			
10)			

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?
\square Confidential (track names) \square 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?
\square SurveyMonkey \square Google Forms \square QuestionPro \square 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 #

☐ Hospit	tals: Total #
☐ Other	: Total #
•	an electronic list of all of the agencies or hospitals or OTHER you indicated ous question? (select one)
□ Yes	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	g the Survey Instrument
Pretesting: V	What method(s) would you use to pretest your survey questions?
Pilot testing: plan?	: What method(s) would you use to pilot test your survey and implementation

9) Implementing Your Survey

Based on the su your survey con	rrvey mode you plan to use, list any barriers you foresee to personalizing respondence.
Discuss possibl	e ways to overcome the barriers listed above.
survey? The ide	relationship with any organizations that could endorse/ support your eal organization is one that already has a personal relationship with your ist the possible organizations here:
List three to fiv	ve possible ways that you plan to personalize your survey:
1	
2	
5-Coi	ntact System
I. PRENOTI	CE
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

(Title)						
(11115)						
	_					
	(Variable 2)					
(Variable 1)	(Categories of	(P-Value)				
	Variable 2)					
(Categories of Variable 1)						
(Categories of Variable 1)						
,						
(Categories of Variable 1)						
,						
(Categories of Variable 1)						
(**************************************						
(Categories of Variable 1)						
(Categories of Variable 1)						
(Categories of Variable 1)						

Title					
					Г
	Comparison Group				
	Comparison Group Variable Category 1	Comparison Group Variable Category 2	Comparison Group Variable Category 3	Comparison Group Variable Category 4	P-value
	variable Category 1	variable category 2	variable category 5	variable category 4	
Comparison Variable/Value					

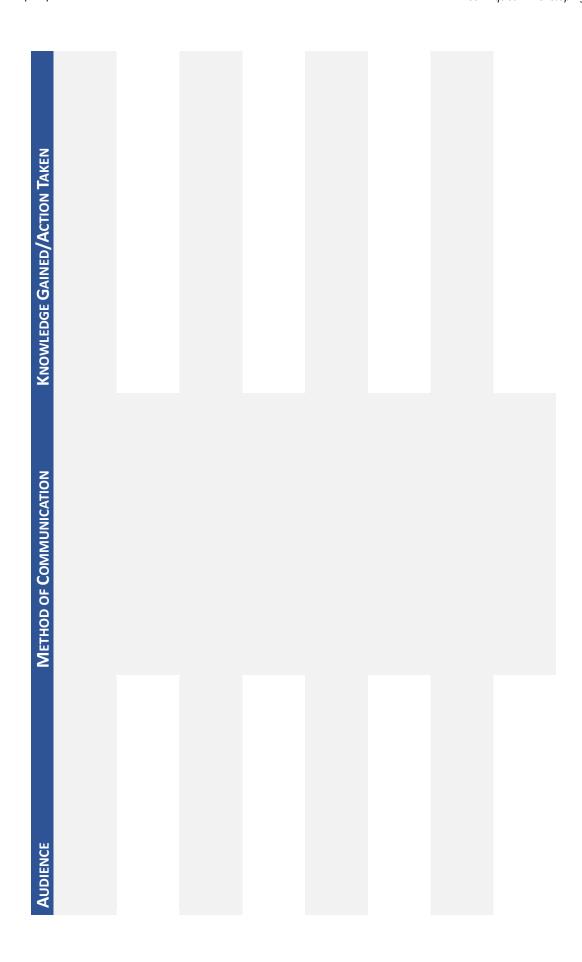
Use a Data Dictionary to define each data element in detail and to describe checks that

you will use to PAGE/QUESTION	VARIABLE	Possible			CHECKS AND
Number	NAME/LABEL	VALUES	DESCRIPTION/PURPOSE	DATA TYPE	RESTRICTIONS
INUMBER	INAIVIE/ LABEL	VALUES			RESTRICTIONS

11) Sharing Results & Taking Action

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?

- o Yes
- o No

What's the problem?

How would you fix it?

Problematic Question 2:

What brand of smartphone do you own?

- o iPhone
- o Samsung
- o 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
- 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?

- o Yes
- o No

Which of the following describes your race? You may select as many as apply.

- o American Indian, Native American, or Alaska Native
- o Asian or Asian-American
- o Black or African American
- o Native Hawaiian or Other Pacific Islander
- o White

0	Some other	race, pl	ease sr	pecify:	

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.

- o American Indian, Native American, or Alaska Native
- Asian or Asian-American
- o Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander
- o White
- Some other race, please specify:

^{*(}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?)

Gen	der
-----	-----

Most common approach:

Are you male or female?

- Male
- o Female

A newer approach that is inclusive of other gender identities:

How would you describe your gender?

- Male
- o Female
- o 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?
/

Marital status

Which one of the following best describes your relationship status?

- Married
- o Living with a partner, unmarried
- o Divorced
- Separated
- Widowed
- Never been married

Education level

What is the highest level of school you have completed?

- o Less than 12th grade
- o High school graduate or GED
- o Some college, no degree
- o 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)

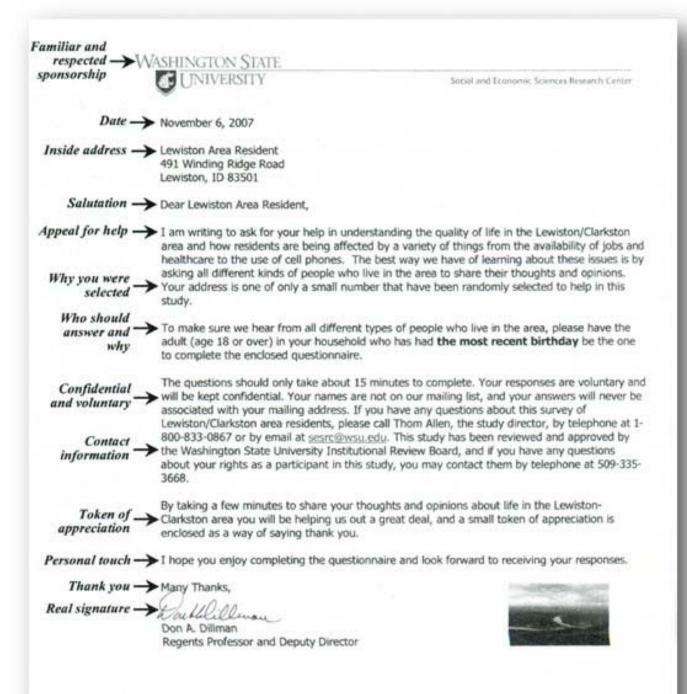
Income

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?

- o Less than \$10,000
- o \$10,000 to less than \$20,000
- \$20,000 to less than \$30,000
- o \$30,000 to less than \$40,000
- o \$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
- o \$150,000 or more

Example Invitation Letter



Research Administrative Offices, 133 Witton Hall PO Box 644014, Fullman, Vol. 99164-9014 • 509-333-1511 • Fax: 509-335-0116 Public Opinion Laboratory, 1425 NE Tente View, Suite 8 PO Box 641801, Pullman, Vol. 99164-1801 • 509-335-1721 • Fax: 509-335-4688



Social and Economic Sciences Research Center

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 1-800-833-0867 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,

Don A. Dillman Project Director

Washington State University

Millellenay

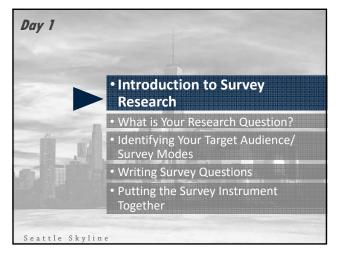
P.S. We have enclosed a small token of appreciation as a way of saying thanks for completing the survey!

Research and Administrative Offices, 133 Wilson-Short Hall PO Box 644014, Pullman, WA 99164-4014 • 509-335-1511 • Fax: 509-335-0116

Workshop Presentations





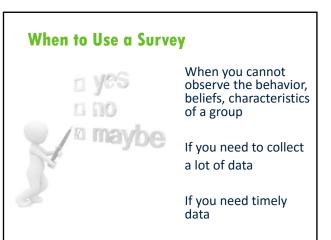


What is Survey Research?

- Systematic collection of data
- Uses structured, predetermined 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



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

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

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

Current Landscape

Percent of U.S. Households						
that have or use:						
98%	Phone (mobile or landline)					
96%	USPS mail delivery					
85%	Internet					
73%	Have internet at home					

Technology & Culture Changes

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



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

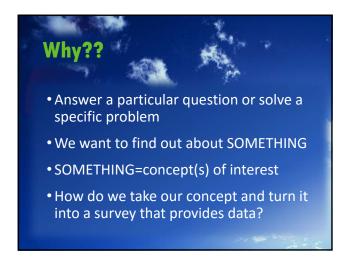
- The project does not collect any identifying information on individuals
- The project cannot link individual responses with identities

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









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 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







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





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

Research Question

Characteristics of a good research question

- Feasible
- Clear
- Significant
- Ethical

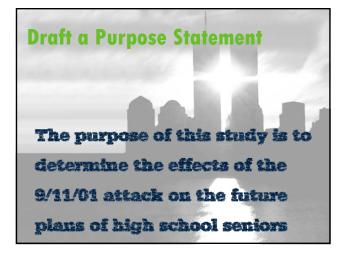
Formulate Research Question

- 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?



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?



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?

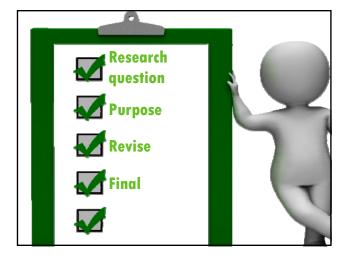
Other Examples

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

All or some of these

Local Agencies

could be your target population...

Agency Manager

• Agency Ambulance Inspector

Inclusion/Exclusion

Further define your 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

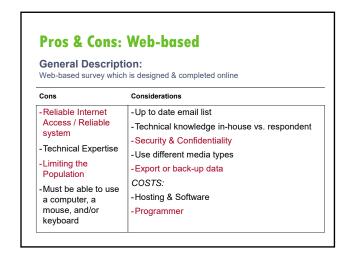
- Web-based
- Paper

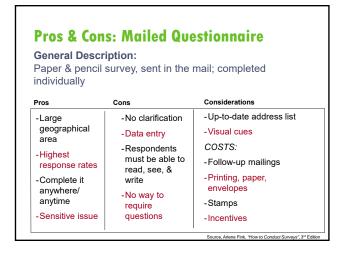


Self-Completion Method Considerations...

- 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 - Track user response rate - Automatic Reminder, Thank You, Spell Check, & Math - Easy Pilot Testing







Pros & Cons: Telephone Interview General Description: Conduct interviews over the telephone with scripted questions & prompts Considerations Pros Cons -Explore -Non-response -Current phone #s options with may be high -Need a schedule respondents -Need trained COSTS: -Assist with interviewers -Training words or -Phone culture -Telephone Charges questions has changed -Computer & -Is the Technical Expertise respondent -Incentives reachable by phone?

Phone Script is Essential

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 new 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.

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?

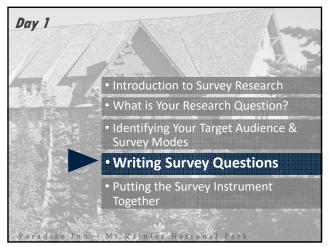
- Review pros & cons slides
- Use focus groups or pilot testing
- Consider resources are available to you
- What you'd like to do versus what you have time to do
- How will the data be analyzed?
- Consider costs

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"
- Reaching Emergency Medical Services Providers: Is One Survey Mode Better than Another? Patricia Schmuhl, et al (2010) Prehospital Emergency Care, 14:3, 361-369, DOI: 10.3109/10903121003760184
- Gallop Poll Examples (http://brain.gallup.com/)
- Free download to improve survey literacy <u>www.whatisasurvey.info</u> (American Statistical Association)

Questions?

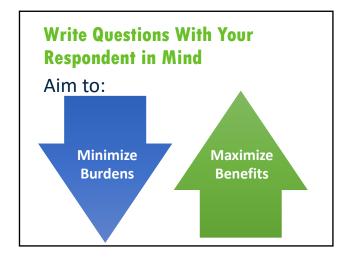






Careful Question Writing is Key

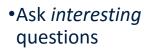
- •The way you ask a question shapes the answers you will get
- •It's very easy to unintentionally bias responses
 - Bias: to cause an inclination for or against certain responses
- Poor question writing can also cause imprecise responses

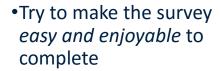


Reducing Burden

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

Maximizing Benefits







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



Components of a Survey Question

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

In yo

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:

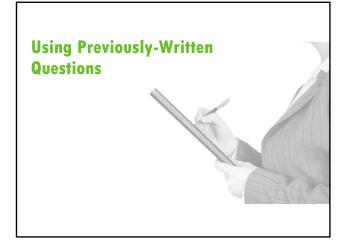
In what month and year were you born? Please report your answer in a MM/YYYY format.



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.



Many Survey Questions Already Exist

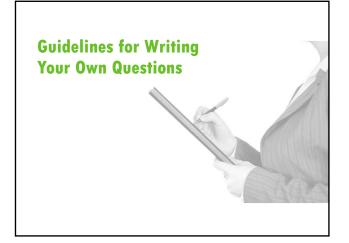
- When setting out to write your survey, first look for already written surveys that have questions you'd like to ask
- No need to "reinvent the wheel" when it comes to frequentlyasked questions
 - For example, demographics

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



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? oYes oNo

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?

oiPhone

about how this survey

please share them here:

workshop could be improved,

- oSamsung
- oOther, please specify: _____



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.? If you have any thoughts

Examples of Open-Ended Questions

1. _____ 2. ____ 3. ____

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.



Examples of Ordered Scale Response Options

- oStrongly agree
- oSomewhat agree
- ONeither agree nor
- disagree
- oSomewhat disagree
- Strongly disagree

- o Poor
- o Fair
- o Good
- o Excellent
- o Less than \$25
- o \$26 to \$50
- o \$51 to \$75
- o \$76 to \$100
- o Greater than \$100

Non-Ordered Closed-Ended Questions

What is your favorite fruit?

- oApples
- oPeaches
- Strawberries
- oGrapes
- oOther, 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?

- oOnline job posting
- oA 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?

o18-40

o40-60

o60-80

o80 or above

Example: Answer Choices are Not Mutually Exclusive

How did you first hear about last week's Tornado?

- oFrom someone at work
- oOn TV
- oThe radio
- oBefore leaving home for work
- oWhile 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	inter	reste	d 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.

	Yes	No
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		

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
- o Somewhat satisfied
- o Somewhat dissatisfied
- Very dissatisfied

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

- o Favor
- o 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 subtlety 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:
 - ONot at all satisfied ZERO POINT
 - oSomewhat satisfied
 - OMostly satisfied
 - Completely satisfied
- Bipolar scale of satisfaction AND dissatisfaction
 - Very dissatisfied
 - oSomewhat dissatisfied
 - ONeither satisfied or dissatisfied ZERO POINT
 - oSomewhat satisfied
 - oVery satisfied

Common Mistake: Combining Unipolar and Bipolar Together

- •For example:
 - oVery important
 - OSomewhat important SWITCHES FROM
 - OSomewhat unimportant Positive to Negative
 - ONot at all important

ZERO POINT:

SWITCHES FROM

ANOTHER ZERO

Two Options for Fixing It

Unipolar:

- oVery important
- oSomewhat important
- ONot at all important

Bipolar:

- oVery important
- oSomewhat important
- oSomewhat unimportant
- oVery unimportant

Should Bipolar Scales Have a Midpoint (Neutral) Category?

Midpoint included:

- oVery important
- oSomewhat important
- ONeither important nor unimportant
- oSomewhat unimportant
- oVery unimportant

No midpoint:

- oVery important
- oSomewhat important
- oSomewhat unimportant
- Overy 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

Very likely Very likely
Somewhat likely Somewhat likely
Neither likely nor unlikely Slightly likely

Somewhat unlikely Neither likely nor unlikely

Very unlikely Slightly unlikely Somewhat unlikely

Somewhat unlikely Very unlikely

Comparison of 4 and 5 Point Unipolar Scales

Very successful
Somewhat successful
Slightly successful
Not at all successful

Completely successful Very successful Somewhat successful Slightly 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?

Unbalanced scale with uneven distance between categories:

Balanced scale with more even distance between categories:

Increase it
Keep it the same
Decrease it a little
Decrease it some
Decrease it a lot

categories:
Increase it a lot
Increase it a little
Keep it the same
Decrease it a little
Decrease it a lot

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

How approachable is

your boss?

boss is approachable?

Strongly agree Agree Neutral Disagree Very approachable
Somewhat approachable
Slightly approachable
Not at all approachable

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?

- oLess than \$30,000
- 0\$30,000-\$49,999
- 0\$50,000-\$69,999
- 0\$70,000-\$89,999
- o\$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

- oVery satisfied
- 0
- O
- oVery 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

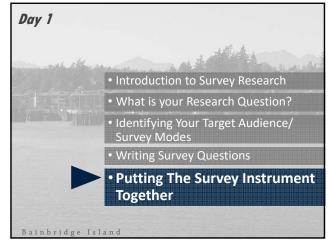
After Drafting Survey Questions:

- •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?





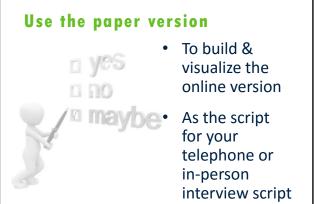


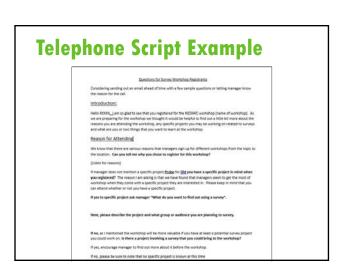


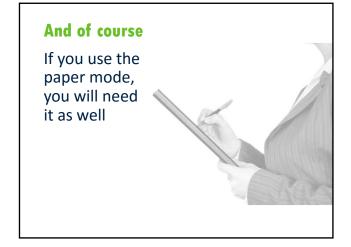


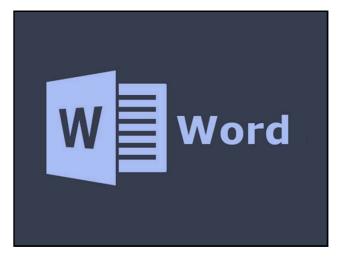




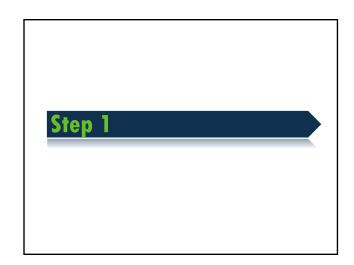








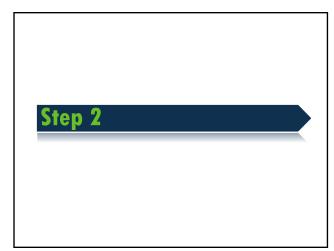
7 Steps for Organizing Your Survey Instrument

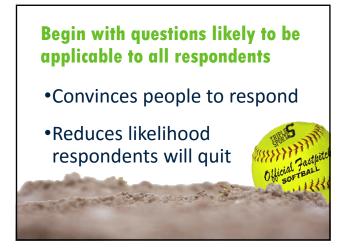










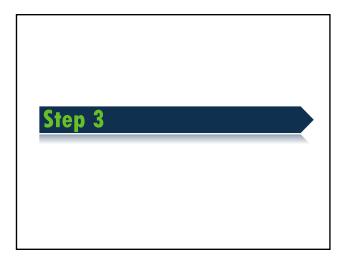








What to avoid in a 1st question Long Boring Difficult to understand Tedious to answer Potentially embarrassing



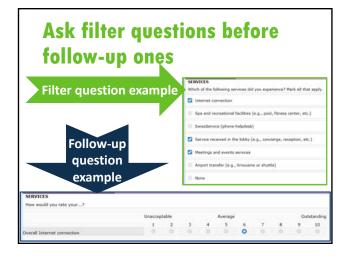
Put sensitive questions near the end



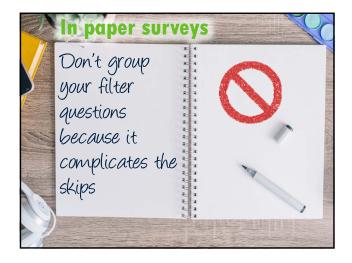
- •Respondents by this time are engaged in your survey
- Respondents have already invested time
- You've established rapport
- Avoids interrupting the flow

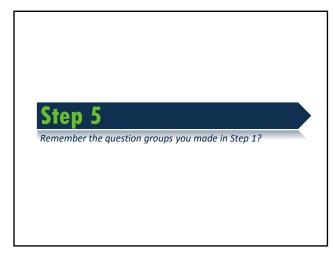




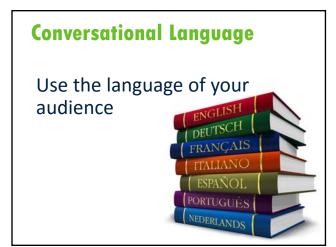


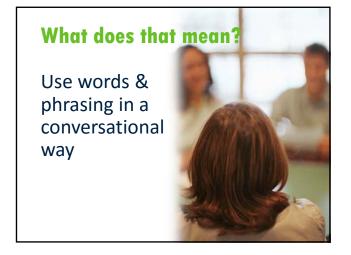




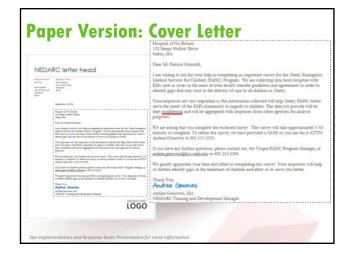


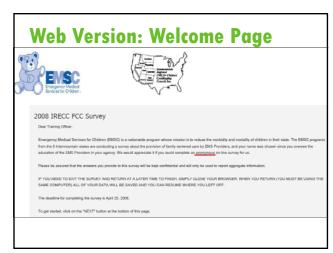






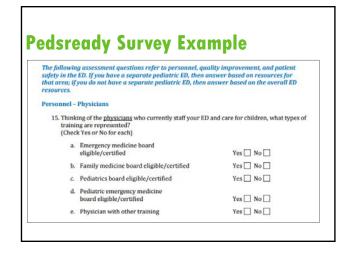




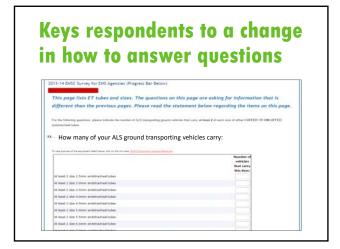


Confidential vs Anonymous CONFIDENTIAL **ANONYMOUS** Don't report Don't know responses with whose respondent response it is name Good if Good if need tracking not to track or important follow-up

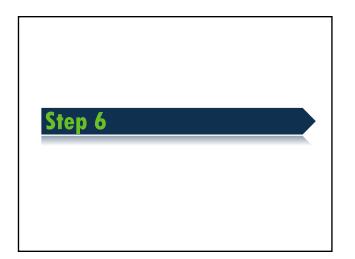


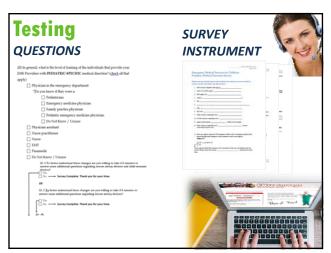






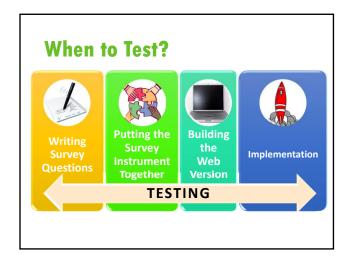


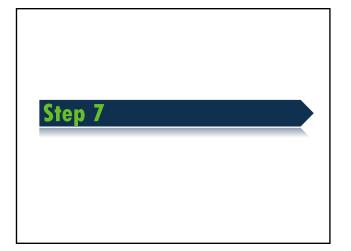




Testing

- •Often reveals unexpected problems
- •Diagnose & fix problems before launch





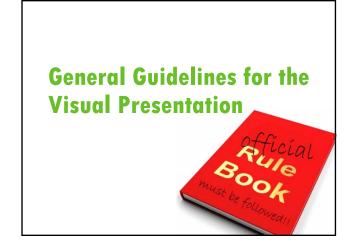


Content & Analysis Feedback Examples

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



Visual Considerations





Questions & Response Options

QUESTIONS RESPONSE OPTIONS

Darker & Lighter & Smaller

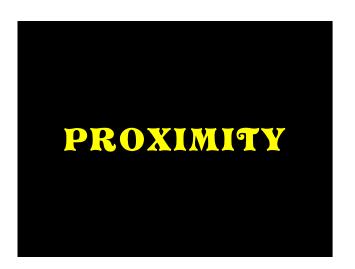


12. If yes, is there a job description or written list of responsibilities for this physician coordinator?

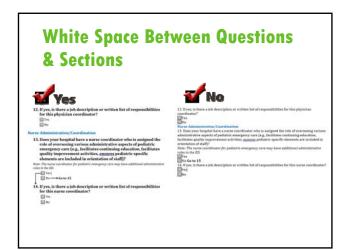
Yes



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



WHITE SPACE

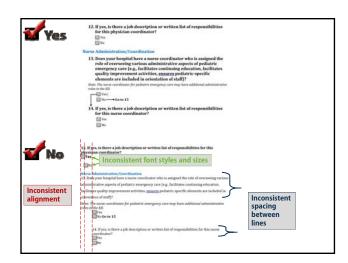


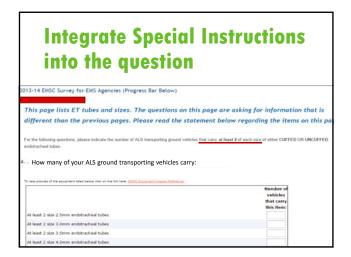


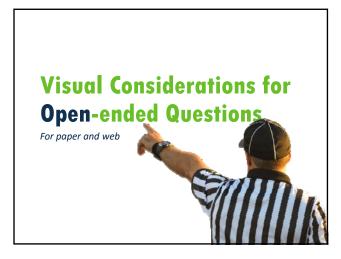
Consistent

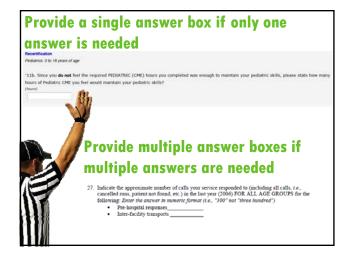
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- Spacing between lines
- Alignment





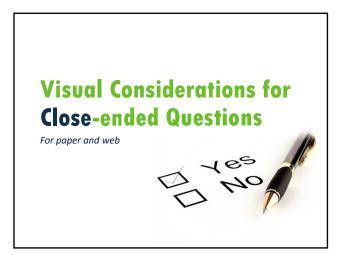


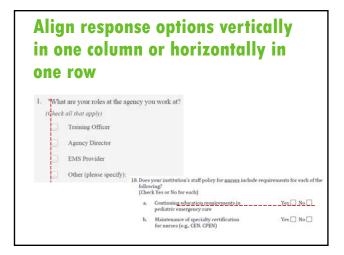










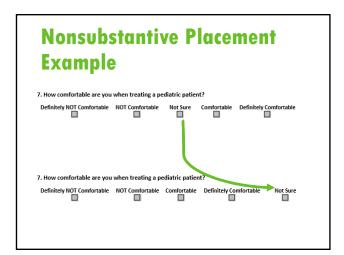


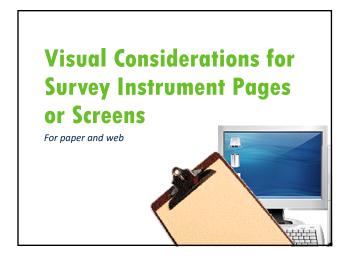
Place Nonsubstantive Options After Substantive



Place Nonsubstantive Options After Substantive

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



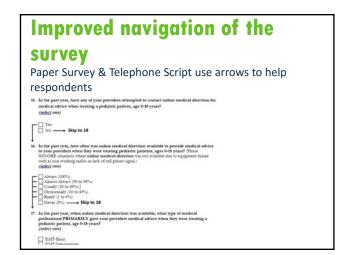


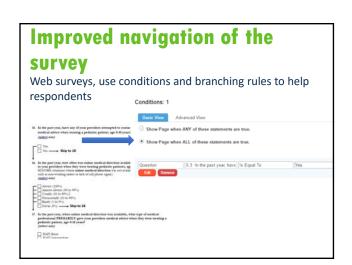
Use a Style Guide

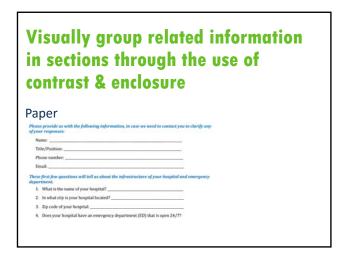
- Visual presentation of questions
- Alignment & vertical spacing

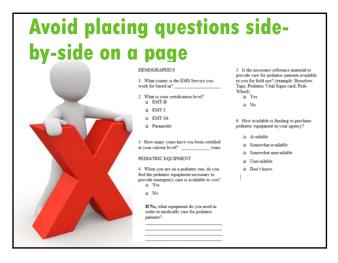


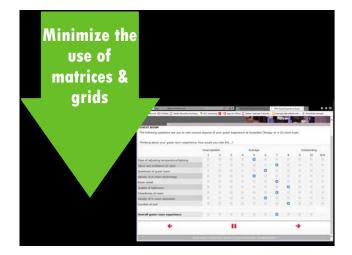


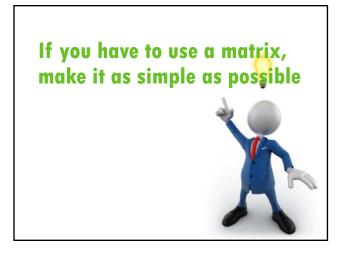


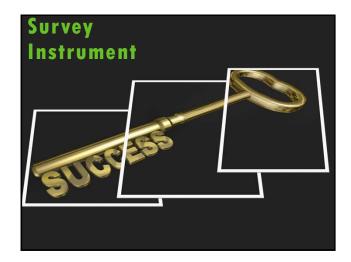




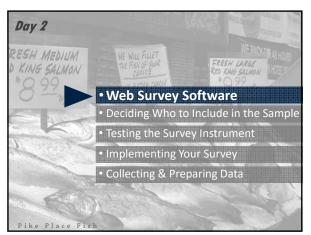










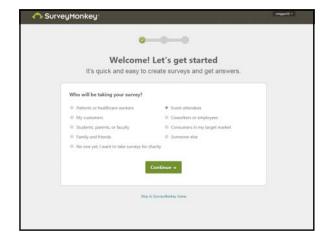


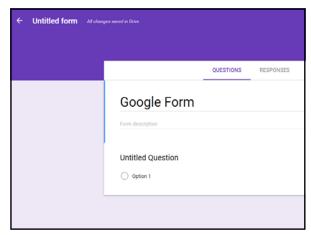
4 Different Web-Based Platforms

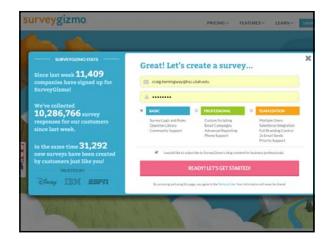
- SurveyMonkey
- Google Forms
- SurveyGizmo
- QuestionPro

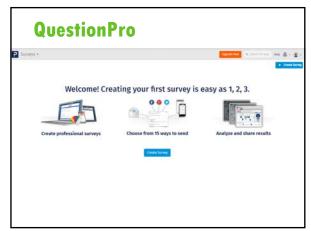
List of the things that I am looking for

- Ownership/ Confidentiality
- •Number of Surveys you can build
- •Number of Respondents /Responses
- Mobile
- Export









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.

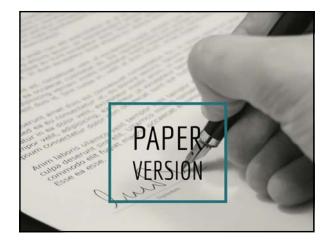
SurveyGizmo Data Agreement

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).



	Survey Monkey	Google Forms	Survey Gizmo	Question Pro
Ownership	YOU	GOOGLE	YOU	YOU
Number of Surveys you can build	100	UNLIMITED	UNLIMITED	1
Number of Responses	100	UNLIMITED	250	100
Mobile Device	YES	YES	PAID VERSION	YES
Exported	Multi	GOOGLE DOC	CVS	Uneditable Charts/ Tables
Number of Questions	10	UNLIMITED	10	10







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 Caro Baramodic	

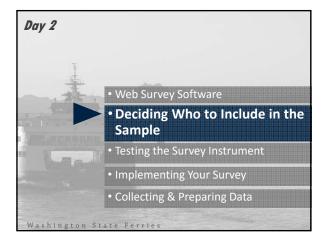
Report Back!

- •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?









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

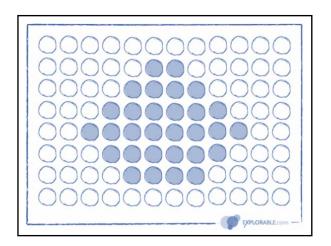
- •Who to get the surveys from (Sample Design)
- Number of surveys needed, more is [usually] ALWAYS better (Sample Size)

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

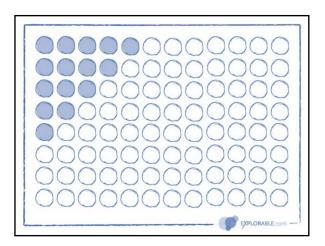
- Pilot or exploratory study
- •Examining a particular trait in population
- •Randomization is not possible
- •Limited budget, time and workforce

Types of non-probability sampling

- Convenience Sampling
- Quota Sampling

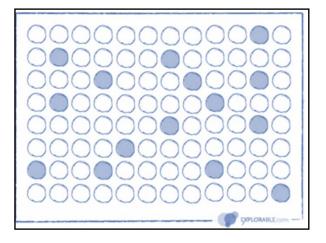
Convenience Sampling

- 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

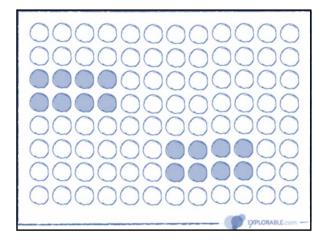


Types of Probability Sampling

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

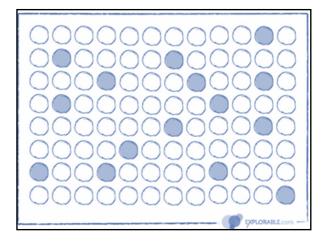
Cluster Random Sampling

- Subjects are clustered
- Each cluster is randomly selected
- Random sample or all subjects from each randomly selected cluster



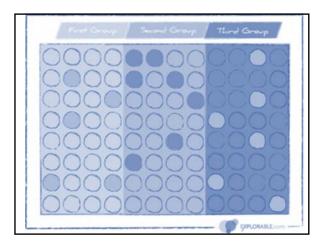
Simple Random Sample

- 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 (nonoverlapping)
- •A random sample is drawn from each group
- Ensures inclusion of group

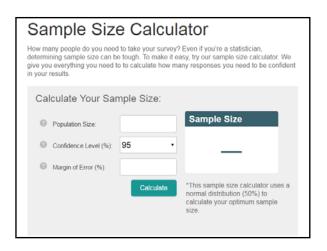


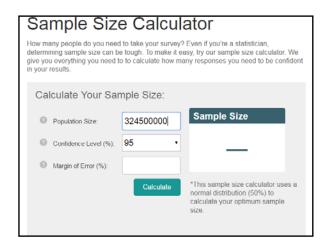
Basics of Sample Size

- 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

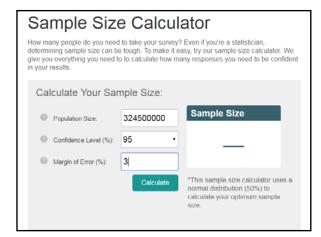
- Population Size (Population of USA 324.5 mill)
- Confidence Level (95%)
- Confidence Interval/Margin of Error (±3)
- Online Sample Size Calculators
- https://www.surveymonkey.com/mp/sample-size-calculator/
- http://www.surveysystem.com/sscalc.htm





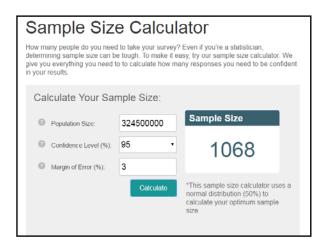
Confidence Level

- 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

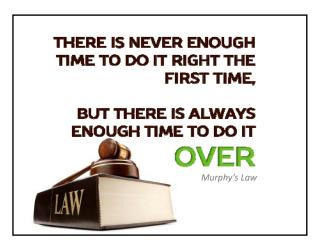
- •1,068 of 324.5 million is 0.000329%
- •132 of 200 is 66%

Combining Sample Size and Sample Design

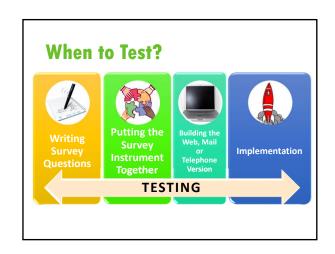
- •The more the merrier
- Probability sampling is best
 - •Simple Random Sample
 - •Stratified Random Sample
 - •Cluster Sample











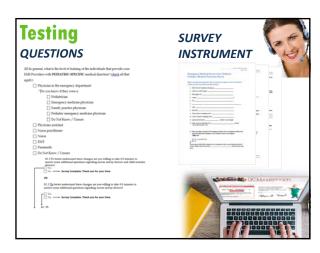
Testing Methods

- •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.







Pretest

Cognitive Techniques

- Think out loud
- · Laboratory and field
- Behavior coding
- Other techniques



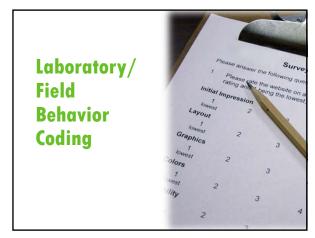
Think Out Loud

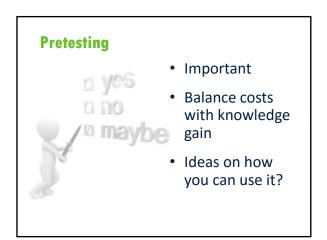
Find out the cognitive processes that respondents use to approach the question and finding the evidence to respond to the question

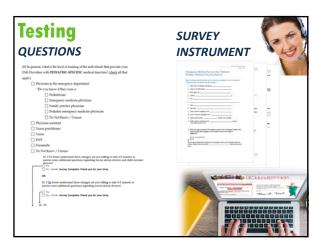














Pilot Studies

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

Trial Run



Surprise!

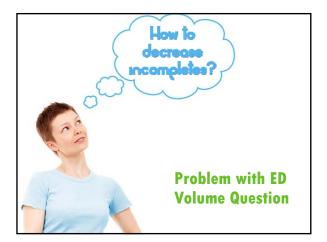
- 1. Refine notification procedures
- 2. Provide cash incentives
- 3. Redesign the introduction to the web-based survey
- 4. Check out data collection and coding



PILOT TESTING

	Week	Week	
Report for 02APR12. Reflects results through Week 11 of 12	Results	Results	Differenc
Cumulative number of completed surveys	189.0	202.0	13.0
Response Rate (%)	56.4	60.3	3.
Average time (IN HOURS) to complete survey	108.5	113.0	4.5
Median time (in minutes) to complete survey	44.6	44.4	-0.:
Number of surveys completed in under 60 minutes	102.0	109.0	7.0
Median time to complete survey of those responses	22.5	22.2	-0.
completed in under 60 minutes			
Average readiness score	72.5	72.2	-0.
Average readiness score for hospitals with low volume	64.7	64.9	0.
Average readiness score for hospitals with medium volume	74.2	73.5	-0.
Average readiness score for hospitals with high volume	79.5	79.3	-0.
Median readiness score	71.8	70.8	-1.
Number of hospitals with perfect readiness score	6.0	6.0	0.
Minimum readiness score	33.8	33.8	0.
Number of surveys started but not completed	25.0	26.0	1.
Number of surveys started but not completed and inactive at least 7 days	22.0	23.0	1.

Survey questions (147 incomplete	# surveys
surveys so far)	non-blank
name	27
Q1. hospital	27
Q6. EDConfig	26
Q.9 AgeMed	25
Q.10 AgeTrauma	25
Q.11 PedEDPatients	14
Q.12 TotalEDPatients	15
Q.13 NatGuideAware	13
Q.16a Barrier_Personnel_YN	10
Q.17 PhysCoord	10
Q.22 NurseCoord	9
Q.33 MidPrac	5
Q.37 QIProcess	4
Q.39 SafetyKilo	3
Q.46 Triage	3
Q.51 Guideline	3
Q.58 MonEquip_BPCuffNeo_YN	3
Q.59 ResEquip_Cath22_YN	3
Q.60a AirEquip_ETT35_YN	3
O.60aa AirEauin AirKitPed YN	2



As written for pilot... • How to avoid high drop-out rate at this point? Please provide actual data or estimations of ED patient volume for the following: 11. List the number of pediatric potients seen in your ED in the last year. (Number of Pediatric Patients... 12. List the total number of patients (adult and pediatric) seen in your ED in the last year. (Number of Total Patients... 13. List the total number of patients (adult and pediatric) seen in your ED in the last year. (Number of Total Patients...

Possible Options

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."

Number of pediatric patients seen in your ED in the last year	
Number of patients (adult and pediatric) seen in your ED in the last year	

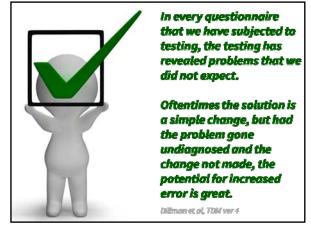
Possible Options

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

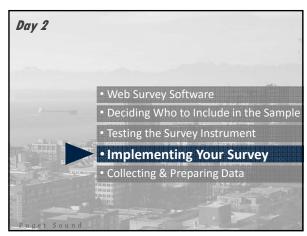
the l	nate the number of <u>pediatric</u> patients (as defined by your hospital) seen in your ED in ast year. ose one)
a	Low: <1,800 pediatric patients (average of 5 or fewer a day)
b	. Medium: 1,800 – 4,999 pediatric patients (average of 6-13 a day)
c	. Medium to High: 5,000 – 9,999 pediatric patients (average of 14-26 a day)
d	. High: >=10,000 pediatric patients (average of 27 or more a day)
your	ou know the actual number or a more precise estimate of pediatric patients seen in ED in the last year, please record below. (Numeric data only, e.g., 500, not "five dred")
Num	ber of Pediatric Patients

Testing is worth the time and effort to make sure that your survey goes as planned A LITTLE BIT CAN GO A LONG WAY	the time and effort to make sure that your survey goes as		
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The Importance of Survey Implementation



It's Not Just About The Questionnaire!

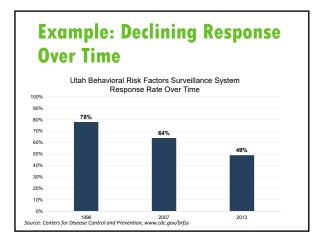
- The procedures used to administer your survey matter just as much as its content
- Careful implementation helps produce useful results

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



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: <u>www.abdccorp/customersatis/895712689716_336.html</u> 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(ababecorp.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 <u>Personalizing</u> 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 <u>Personalizing</u> 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

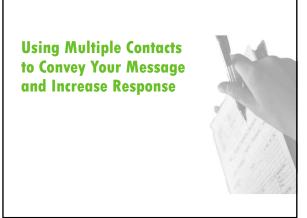
Show Respect for Respondents

- 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 Agel 13, 2012 Seath was limited. To make sure who seath tom at different figure of proper which was to what was seath was limited. The make sure who seath tom at different figure of proper which was to what was seath was limited. The make sure who seath tom at different figure of proper which was to what was limited. First, well the was limited. First, well to was a limited. First, well to was limited.



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.

1 week after #4

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

Final request

5.

1.	Pre-notice	Day 1
2.	Invitation	3-7 days after #1
3.	Thank you/	1 week after #2
	reminder	
4.	Replacement	2-3 weeks after #3

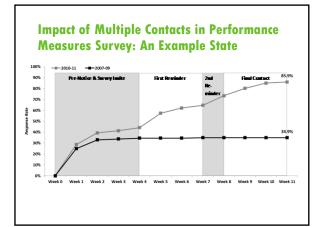
A Mixed-Mode Modification that Emphasizes <u>Web</u> Response

- Day 1: <u>Postal invitation letter</u> 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:** <u>Final email follow-up message</u> with link to survey website

Performance Measures Survey Date Web Survey Mode Paper Survey Mode May 3, 2010 (Monday) May 5, 2010 Survey Invitation email with survey (Wednesday) URL & token of appreciation Sent in morning May 11, 2010 Thank You & Reminder email with URL Thank You & Reminder Postcard Tuesday) Thank You & Reminder Postcard

Example Timelines from 2010-2011

May 26, 2010 (Wednesday) Sent in morning Replacement Survey letter with paper survey and return envelope survey URL (sent in morning) or telephone call June 15, 2010 (Tuesday) Final contact starts (e.g., telephone call, certified letter, (e.g., telephone call, certified letter, FedEx/UPS)



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



Using Incentives

- •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

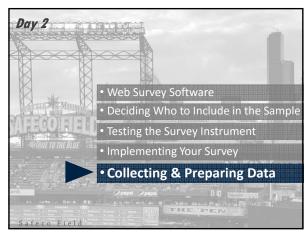
An Increasingly Common Approach:

- 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





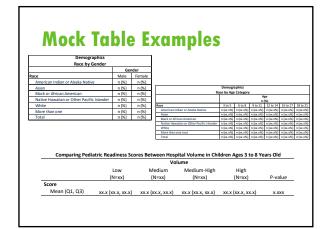


Plan

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

Research question

- •Who
- What
- •Where
- •Why



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

Demographics					
Race by Gender					
	Ger	nder			
Race	Male	Female			
American Indian or Alaska Native	n (%)	n (%)			
Asian	n (%)	n (%)			
Black or African American	n (%)	n (%)			
Native Hawaiian or Other Pacific Islander	n (%)	n (%)			
White	n (%)	n (%)			
More than one	n (%)	n (%)			
Total	n (%)	n (%)			

Mock Table, Transformation

Demographics							
Race by Age Category							
Age							
n (%)							
Race	3 to 5 6 to 8 9 to 11 12 to 14 15 to 17 18 to 21					18 to 21	
American Indian or Alaska Native	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	
Asian	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	
Black or African American	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	
Native Hawaiian or Other Pacific Islander	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	
White	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	
More than one race	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	
Total	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	n (xx.x%)	

Mock Table, Analysis

	High		Volume			
P-valu	(N=xx)	Medium-High (N=xx)	Medium (N=xx)	Low (N=xx)		
					core	
x.xxx	xx.x (xx.x, xx.x)	xx.x (xx.x, xx.x)	xx.x (xx.x, xx.x)	xx.x (xx.x, xx.x)	Mean (Q1, Q3)	
	xx.x (xx.x, xx.x)	xx.x (xx.x, xx.x)	xx.x (xx.x, xx.x)	xx.x (xx.x, xx.x)		

Collecting Correct Data

- •Which variables are needed?
- •Where are those variables collected?

Are any children admitted to your inpatient s pediatric inpatient unit, and/or adult inpatie	
Yes No Go to 9	
 If yes, which of the following inpatient service (Check Yes or No for each) 	es may admit children?
a. Neonatal intensive care unit	Yes No
InptPedCap_NICU_YN	
b. Pediatric intensive care unit	Yes No
InptPedCap_PICU_YN	
c. Adult intensive care unit	Yes No
InptPedCap_AdultICU_YN	
d. Newborn nursery	Yes No
InptPedCap_Nursery_YN	
e. Pediatric inpatient unit	Yes No
InptPedCap_PedWard_YN	
f. Adult inpatient unit	Yes No

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
 - EDAdmissionDTM
 - •LabDTM

Variable Name Groupings 15. Thinking of the <u>physicians</u> 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 PhysTraining_EM_YN Yes 🔲 No 🔲 b. Family medicine board eligible/certified PhysTraining_Fam_YN Yes 🔲 No 🔲 c. Pediatrics board eligible/certified PhysTraining_Ped_YN d. Pediatric emergency medicine board eligible/certified Yes 🔲 No 🔲 PhysTraining_PedEM_YN e. Physician with other training Yes No PhysTraining Other YN You marked "Other" to the previous question. Please describe the other levels of training 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

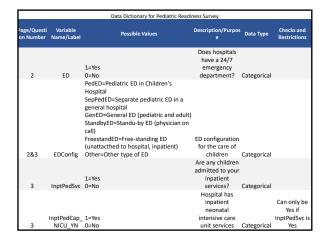
Data Type

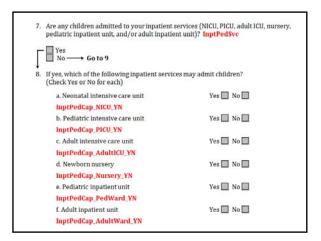
Continuous vs Categorical

- Height
- Race
- Weight
- •Eye color
- •Blood
 - Pressure

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 questions
- •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...

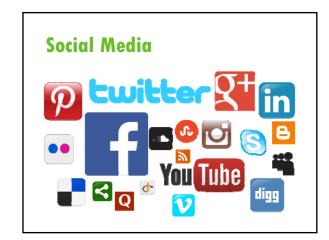
"I am hoping to use the results of this survey to increase awareness of need for pediatric disaster planning, need for improved education, and improve the overall pediatric preparedness of our facility."



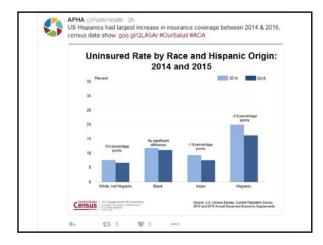


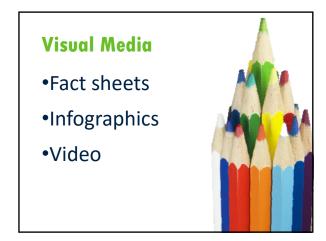
How Do You Want to Share Results?

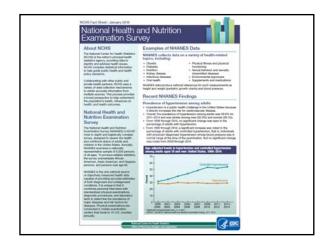
It depends, of course, on who your audience is!

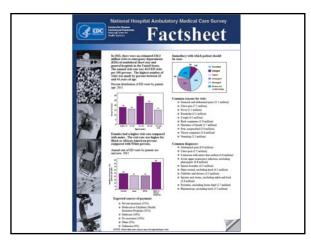












Infographics and Videos

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

