



# Asking the Right Questions: An Overview of the Survey Design Process

**Community Health Data Base**

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## Purpose of this session

- Brief refresher on the Community Health Data Base's Household Health Survey
- Introduce you to key components of designing surveys:
  - Planning out your survey project
  - What type of survey to use
  - How to construct a good questionnaire
  - Tips on administering the survey to get the best results



# Research & Evaluation at PHMC

- Study design and program implementation
  - Qualitative and quantitative data collection
  - Statistical data analysis
  - Database development
  - Proposal development and writing
  - Mapping/GIS
  - Outcomes measurement training
  - Needs assessments
  - Technical and policy reports
- Topics studied:**

  - Health status
  - Access/barriers to care
  - Health insurance
  - Service utilization
  - Health behaviors
  - Disease prevention
  - Maternal and child health
  - HIV/AIDS
  - Gerontology
  - Family and youth violence
  - Adolescent health/sexuality
  - Substance abuse
  - Mental health



## PHMC's Community Health Data Base (CHDB)

- Provides population-based data to health and human service organizations
- Collects primary data through the Southeastern Pennsylvania Household Health Survey and provides secondary data sets (US Census and vital statistics)
- Supported by the following:
  - Pew Charitable Trusts;
  - William Penn Foundation;
  - United Way of Southeastern Pennsylvania;
  - Green Tree Community Health Foundation;
  - United Way of North Penn;
  - CIGNA Foundation;
  - Philadelphia Foundation;
  - North Penn Community Health Foundation;
  - Thomas Scattergood Foundation; and
  - Over 400 health and human service providers in the region



# How are CHDB data used?

A wide range of health and social service agencies use the Community Health Data Base for...

- Strategic planning, growth decisions, facility planning
- Needs assessments
- Marketing and outreach
- Advocacy and public relations
- Grant-writing, development and institutional advancement
- Community health programming
- Disease management initiatives



# Southeastern Pennsylvania (SEPA) Household Health Survey: History

- Most recent survey conducted in Summer 2010.
- Survey began in 1983. Other survey years: 1991, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, and 2010.
  - Berks, Lancaster, Schuylkill Counties: 2008 and 2011
  - Centre County: 2009
  - Mercer County: will be fielded Summer 2011
- Sample of over 10,000 households in SEPA.
- Interviews conducted by telephone using random-digit dial.
- Additional 3,000 interviews on children's health. Interviews about selected child conducted with child proxy.
- Oversample of persons 60+ and 75+



# Community Health Data Base

What do I get through membership or affiliation?

Data - Household Health Survey, US Census, Vital Statistics

Direct Assistance - assigned research associate

Reports and Publications - hard copy, online, e-mail

Special Events - skill building seminars, orientations, data development

Website - [www.CHDBdata.org](http://www.CHDBdata.org)

Online Data Analysis Tool and Online Report Card Tool



# What Types of Data Are Available to You?

- **Many existing sources of population and health data**
  - U.S. Census/American Community Survey
  - Vital Statistics
  - Federal surveys
    - NHIS (National Health Interview Survey)
    - BRFSS (Behavioral Risk Factor Surveillance System)
    - NSCH (National Survey of Children's Health)
  - CHDB's Household Health Survey
  - Survey conducted previously at your agency - revisit/re-analyze
    - Data already collected is called **secondary data**
- **Sometimes existing sources of data do not meet your needs**
  - Data you collect is called **primary data**



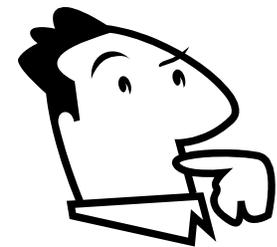
# Why Collect Primary Data?

- Obtain information not available from existing sources
- Complement information from existing sources
- Obtain in-depth information about a topic of interest
- Involve consumers in program evaluation and development
- Important public health or public policy value



# What Data Collection Methods are Most Commonly Used?

- Data collection methods
  - Focus group discussions
  - Key informant/In-depth interviews
  - Surveys
- All three methods involve asking questions
- Method you choose depends on information needs and resources





# Mapping Your Survey Project: Know where you're headed

Plan out survey design from start to finish

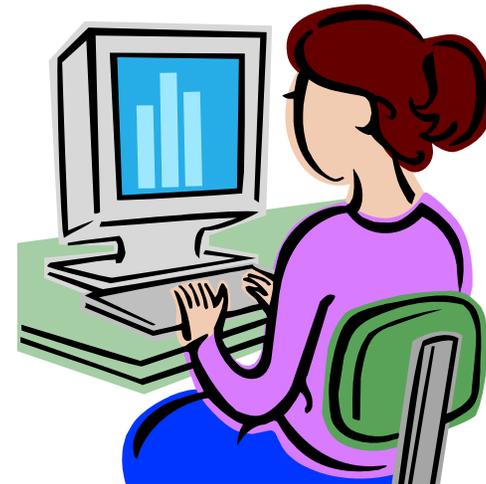
- Exactly what are you trying to find out?
  - Clear research question(s)
- Do you have necessary resources?
  - Time, people, money, expertise
- What is the best method for you?
  - Select methodology based on your aims and constraints
- Who is your target population and how will you reach out?
  - Participant recruitment plan





# Mapping Your Survey Project (Cont.)

- Do you need Institutional Review Board (IRB) approval?
  - See US Department of Health and Human Services Office for Human Research Protections (<http://www.hhs.gov/ohrp/>)
- Survey implementation
  - Pilot testing
  - Review and revision
  - Coding and data processing
- Who is your target audience?
  - Hard copy report, journal publication, press releases, community meetings?





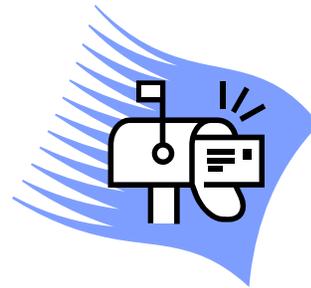
## Before Writing Your Own Survey Questions

- Creating an instrument is difficult and time-consuming
- Look for existing surveys (or questions) to meet your needs
  - Existing instruments have been tested (or at least used)
- Caveats
  - Existing instruments are not necessarily good quality and may not meet your needs
  - Be careful of modifications—especially with standardized scales
  - You may need permission from the authors
  - May involve payment



# Types of Surveys: Pros & Cons

- Mail
- Telephone
- In-person
  - Staff-administered interview
  - Self-administered
- Online/Internet
- Combination of two or more methods





# Questionnaire Layout or Format

- Will differ for self-administered and interviewer-administered surveys
- For Self-Administered Surveys:
  - Any self-administered survey must be entirely self explanatory
  - Make sure it is clear where answers should go—boxes or blank line
  - Make it clear who should answer questions—mark skips
  - Leave enough blank space for clarity and comments
- Consider appropriate transitions between sections



## Example: Questionnaire Transitions

You will now be asked about your **opinion** on some statements about using alcohol and drugs...

The next set of questions is about **HIV testing**...

The next set of questions is about **medicines you may be taking** to treat your HIV infection. These medicines are drugs like AZT, 3TC and protease inhibitors. These drugs are often taken together and are known as combination therapy or triple drug cocktails. These drugs are called antiretrovirals...

The next questions ask about some of **your experiences and opinions** as to how people with HIV feel and how they are treated...

You will now be asked about **your opinions** on some statements about health and HIV...



# Issues in interviewer-based research

- Training training training!
  - Interviewer comfort level
  - Interviewer monitoring (quality control)
- Consistency (interviewer reliability) vs. rapport
  - Scripted responses/probes
  - Leading style; social desirability bias
- Cost



# Introducing the Survey

- All surveys/interviews need an introduction
- Mail surveys need a cover letter
- In-person and self-administered surveys may need consent form
- Cover letter and consent can include:
  - Purpose/importance
  - Assurances of confidentiality and/or anonymity
  - Benefits and risks to respondent
  - Assurances that participation is voluntary
- Special information for self-administered surveys
  - What to do with completed surveys
  - Who to call with questions



Before we begin, I'd like to explain a few things to you. We're very interested in your honest answers so we can make housing and services better for you and others who use transitional housing programs.

Some of the questions I'm going to be asking are personal in nature, but do not hesitate to speak openly about your experiences.

There are no right or wrong answers. We want to learn as much from you as we can. However, you don't have to answer any question you don't want to.

Nothing you tell me will affect your housing or any services you and your family receive. Your name will not appear anywhere. No one will ever know how you answered these questions.

Finally, all of your responses are confidential, except that, if you tell me about child abuse or neglect, the laws of \_\_\_\_\_ require I report that if I learn about it.



# Getting People to Participate In a Survey & Survey Timing

- Make it convenient for participants
- Communicate value & purpose
- Survey length (response rate)
- Use of incentives
- When to field the survey (seasonal issues)
- Multiple survey points?
  - How often do you want to conduct the survey
  - Follow same participants vs. cross-sectional surveys
  - Consistency



# Questionnaire Development: Issues to Consider

- Question content
- Question wording
- Form of response
- Question order



# Question Content

- What do you want to get back from this question?
- What kind of question are you asking?
  - Knowledge, Attitude, Behavior
  - Socio-demographics



# Question Content

- What do you want to get back from this question?
- What kind of question are you asking?
  - Knowledge, Attitude, Behavior
  - Socio-demographics
- Do respondents have the necessary knowledge or experience to answer?
- Is the question on a sensitive topic or threatening?
- Is the question necessary?



# Question Wording

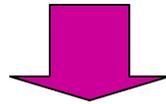
- Be specific
  - General questions yield general information
  - Time frames
  - Place frames



## Question Wording: Place Frames

POOR QUESTION

Where were you born?



STRONG QUESTIONS

In what country were you born?

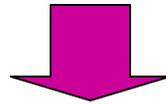
What was the name of the  
hospital where you were born?



## Question Wording: Framing

POOR QUESTION

Are you a smoker?



STRONG QUESTION

During the last week,  
have you smoked any  
cigarettes?



## Question Wording: Providing Context

An “A one C” test measures the level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for “A one C”?

Next, I am going to ask you some general questions about health care in the United States. I would like you to think about your personal experiences and also what you know about other people’s experiences with the Health Care System. By the Health Care System I mean hospitals, doctors’ offices, community clinics, and labs as well as organizations like insurance companies and drug companies.



# Question Wording

- Keep it simple
  - No complex sentences
  - No jargon
  - No double negatives
  - Ask one thing at a time (No double-barreled questions)

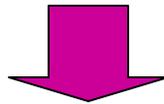


## Question Wording: Break It Down--Example

Double-barreled  Break it into two (or more)!

POOR QUESTION:

- Would you say that your healthcare provider is knowledgeable and compassionate?



STRONGER QUESTIONS:

- Would you say that your healthcare provider is knowledgeable?
- Would you say that your healthcare provider is compassionate?



## Question Wording: Minimizing Bias

- Be aware of perceived social desirability of responses
  - Acceptability of behavior, attitudes, values
- Be neutral
  - Avoid loaded language
  - Avoid leading questions



## Question Wording: Leading--Example

### LEADING QUESTION:

Do you agree that public health professionals should earn more money than they currently earn?

- Yes, they should earn more
- No, they should not earn more
- Don't know / No opinion

### STRONGER QUESTION:

Do you believe that public health professionals' salaries are a little lower than they should be, a little higher than they should be, or about right?

- Public health worker salaries are a little lower than they should be
- Public health worker salaries are a little higher than they should be
- Public health worker salaries are about right
- Don't know/No opinion



## Question Wording: Leading--Example

Do you think Arizona was right to take action by passing its new immigration law and not waiting any longer for the federal government to act, or do you think securing the border with Mexico is the responsibility of the federal government and Arizona should have waited for the federal government to take action on immigration?

<http://gawker.com/#!5533572/fox-news-survey-says-most-americans-agree-with-arizona-immigration-bill>



# Question Wording (Continued)

- Be Aware of Sensitive Topics
  - Income
  - Age
  - Race/ethnicity
  - Home address
  - Drug use
  - Crime
  - Sexual practices



# Activity (Groups of 2 or 3)

## Question Wording



# Form of Response

## Closed-Ended

- Respondents choose answer from a predetermined set of choices
- Quantitative data
- Population surveys, polls
- Guaranteed comparability of responses
- Pre-coded responses are easier to analyze and summarize
- Information may be superficial in nature or miss key points



# CHDB Example: Closed-ended Question

1. Would you say your (his/her) health, in general, is excellent, very good, good, fair, or poor?

Excellent	1	HEALTHA52
Very Good	2	
Good	3	
Fair	4	
Poor	5	
[DON'T READ] Don't Know	8	
[DON'T READ] Refused	9	



# Closed-Ended Responses

- **Response Choices**
  - 4-5 categories maximum
  - Likert-style item or scale
  - Forced choice?

Would you say that you Strongly Agree, Agree, **Neither Agree Nor Disagree**, Disagree or Strongly Disagree with the following statement....

- Don't know, N/A
- Randomization - primacy and recency



# Closed-Ended Responses

- **Response Choices**
  - 4-5 categories maximum
  - Likert-style
- **Numerical rating scales**
  - Use when there are more than five categories
  - Rank Items (should not exceed 10)
- **Considerations**
  - Are all alternatives covered?
  - Do choices overlap?
  - Are the meanings of the categories clear?



# Form of Response

## Closed-Ended

- Respondents choose answer from a predetermined set of choices
- Quantitative data
- Population surveys, polls
- Guaranteed comparability of responses
- Pre-coded responses are easier to analyze and summarize
- Information may be superficial in nature or miss key points

## Open-Ended

- Respondents answer questions in their own words
- Qualitative data
- Focus groups, key informant interviews
- Allows for distinctions that are not possible with pre-coded formats
- Information is subject to interviewer and coder variance
- Information may be difficult to analyze and summarize in a concise manner



# Open versus Closed: Example

How many hours of television do you watch in a typical day?

- Less than 1
- 1 to 2
- 2 to 3
- More than 3

How many hours of television do you watch in a typical day?

\_\_\_\_\_ hours



# Open-Ended Responses

- **Qualitative or Quantitative**
  - Describe your experience...
  - How many?
- **Advantages**
  - Specificity
  - Context
- **Considerations**
  - Transcription, Coding and Analysis
  - Will the responses be meaningful?



# Question Order

- Questions should be grouped by topic if multiple topics
- First questions should arouse interest
- Sensitive questions are often best at the end
- Is there a logical order for the questions such as the time frame?
- Is the answer likely to be influenced by previous questions?



# Question Order: Example

- Do you love nature?
- Will you donate money to help the river?
  
- Is lack of money a problem for you?
- Will you donate money to help the river?

Pierce, Rod. "Survey Questions" Math Is Fun. Ed. Rod Pierce. 14 Nov 2010. 15 Apr 2011 <<http://www.mathsisfun.com/data/survey-questionnaire.html>>



# Activity (Groups of 2 or 3)

## Question Order



# Pilot Testing: Why pilot test?

- Prevents problems down the road
- Feedback from a pilot test can tell you if questions:
  - Are clear and make sense to others
  - Provide the information you need
  - Are at appropriate reading and language levels
  - Need skips or different ordering
- Revise based on pilot feedback:
  - Assess refusals and other potential problems
  - Time the survey to determine about how long it will take



# Quality Control

- For self-administered questionnaires, review responses to see if questions are understood and answered properly.
- For interviews, review answer forms and taped interviews to make sure questions are being asked as written and answers are complete and consistent.



## Quality Control (Cont.)

- Make sure you are collecting and recording all the information you need
  - Date and place of data collection
  - Interviewer name
  - Time the length of interview
  - ID number or names to link surveys



# Contacting Us About Household Health Survey Data

[www.CHDBdata.org](http://www.CHDBdata.org)

For questions about CHDB and  
survey design, contact:

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215-985-2524



# For more information about the CHDB, please visit: [CHDBdata.org](http://CHDBdata.org)

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**COMMUNITY HEALTH DATA BASE**  
An Information Service of Public Health Management Corporation

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## Welcome

Since 1983, Public Health Management Corporation's (PHMC) Community Health Data Base (CHDB) has served the information needs of health and human service agencies in the Southeastern Pennsylvania region by providing up-to-date and reliable community-level health and social service data.

The CHDB is funded by the [Pew Charitable Trusts](#), the [William Penn Foundation](#), the [United Way of Southeastern Pennsylvania](#), & local hospital systems & health and human service organizations.

Please visit the CHDB website monthly for new data findings and member highlights!

### Data Analysis TOOL

Username  Password

[not a member?](#)  
[forgot your password?](#)

### Data Findings

#### Falls within the past year among older adults in Southeastern Pennsylvania

The CHDB is recognizing National Public Health Week! The following article presents findings from the 2010 Household Health Survey about falls within the past year among adults 60 years of age or older residing in the five-county Southeastern Pennsylvania (SEPA) region. In SEPA, nearly one in five older adults (18.7%) has fallen within the past year, representing approximately 147,000 older adults in this region. Recent falls among older adults are examined by demographic, socio-economic, housing, geographic location, and health characteristics.

[View Details >>](#)

#### Spotlight



**Philadelphia Corporation for Aging**

PCA is a private, non-profit organization and has served as Philadelphia's Area Agency on Aging since 1973. [View Details >>](#)

### New Data Findings

#### Announcements

[University of Wisconsin County Health Rankings Available](#)  
Click this link to learn more about the University of Wisconsin County Health Rankings.

[Online Data Tool to be updated with 2010 Household Health Survey Data!](#)  
Interested in accessing 2010 Household Health Survey data using our Online Data Tool? Find out more about updates to the online tools here!

[Connecting Local Institutions to Population Data](#)  
CHDB spoke at the Medical Library Association, Philadelphia Regional Chapter's Annual Business Meeting and Reception. Click here for slides.

[2011 Berks-Lancaster-Schuylkill Survey in the field!](#)  
Click this link to learn more about the CHDB's 2011 Berks-Lancaster-Schuylkill Household Health Survey.

[2010 SEPA Household Health Survey Data Released!](#)  
Click this link to read about our 12th Southeastern Pennsylvania Household Health Survey.

[CHDB Can Come to You!](#)  
Your CHDB Associate is available for onsite orientations, trainings or demonstrations.

[CHDB Orientation on May 10th](#)  
Please join us for our next Orientation to learn more about the Community Health Data Base and how you can access Household Health Survey data.

[Healthy People 2020 Objectives Released!](#)  
The US Department of Health and Human Services just released the Healthy People 2020 Goals and Objectives. For more information, please click here.

[CHDB Spring 2011 Calendar](#)  
Click here for our calendar, including orientations, trainings and special events!

[New Map Highlighting Smokers in SEPA](#)  
The data corner features a new map of smoking prevalence for SEPA counties. Click here for our 2008

To receive the Community Health Data Base's monthly e-mail newsletter, including the latest facts and findings from the Southeastern Pennsylvania Household Health Survey, please email: [johannat@phmc.org](mailto:johannat@phmc.org)