Exploratory Focus Group Discussion Guide

Selected Women

PURPOSE STATEMENT: To explore perceptions of and responses to scientific uncertainty in order to inform a framework for communications about CDC's biomonitoring research.

I. Introduction (10 minutes)

a. THANK RESPONDENTS FOR ATTENDING. BRIEFLY INTRODUCE SELF.

b. GROUND RULES
   - CONFIDENTIALITY
   - HONESTY/OK TO DISAGREE
   - TAPING
   - SPEAKING ONE AT A TIME
   - BATHROOM
   - ETC

c. [GO AROUND THE ROOM, ASK RESPONDENTS INTRODUCE THEMSELVES.] Can you please give me your first name and tell me the names and ages of your children.

II. Attitudes Toward Health and Scientific Uncertainty (15 minutes)

Let's start with talking about science and health. New scientific discoveries related to health come out all the time.

a. What are some ways that science contributes to improving health in our society? [PROBE: health research?]

b. With a show of hands, how interested are you in stories about health research? [very interested, somewhat interested, not really interested]
   - ➢ Those of you that said you were interested, what are some reasons that make you interested?
   - ➢ Those of you that aren't interested, what are some reasons for that?

c. Where do you hear about health research?

d. When you hear new health information or research results, how do you know that it's believable?
   - ➢ [EXAMPLES IF NECESSARY: who you heard it from, who conducted it, how many times you hear it]
   - ➢ [PROBE: trusted sources?]

e. In general, what makes "good science"? What qualities does it have? [CLARIFY IF NECESSARY: what makes good health research?]
   - ➢ [EXAMPLES IF NECESSARY: source, reliability, replicability, unbiased]

f. Who conducts “good science”? [CLARIFY IF NECESSARY: who conducts good health research?]

  - Does the government do “good science”? [CLARIFY IF NECESSARY: what about good health research?]

g. What are some of the limitations of “good science”? [CLARIFY IF NECESSARY: are they the same limitations for good health research?]

  - [EXAMPLES IF NECESSARY: cost, takes too long, inconclusive results, conflicting information]

III. <u>Communication about Uncertainty (15 minutes)</u>

a. [EXERCISE 1] [ON EASEL, WRITE WORD “UNCERTAINTY”] Many of the examples that you just gave about the limitations can be summed up in this word, uncertainty. Let’s take a minute to explore what scientific uncertainty means to you.

  - What do think scientific uncertainty is? [WRITE DOWN EXAMPLES ON EASEL]

b. Good science takes time and uncertainty can be part of the process. Is uncertainty inherent in good science?

  - What does that imply? (Is it a good thing? A bad thing?)]

c. Can you think of any examples of health information or research results that had some uncertainty?

d. Is it important for the average person to hear about ways in which science is uncertain? Tell me about that.

e. Thinking about what you currently hear about scientific uncertainty related to health research studies, do you want to hear more, less, or are you getting the right amount?

f. Information about health is sometimes uncertain. In other words, sometimes there isn’t enough information for us to draw conclusions about “what to do”. Even if the information isn’t always clear, does information about potential health risk affect the decisions you make for yourself or your family? How?

  - What do you do?
  - What factors help you decide whether to do something or not? [PROBE: who the information comes from? How you found out about it? Hearing about it from more than one place?]
  - What happens when you hear conflicting information from different sources? [PROBE: How do you know who or what to believe?]

IV. <u>About biomonitoring (10 minutes)</u>

We’ve been talking a lot about uncertainty. One area with a lot of uncertainty is research on how chemicals in the environment affect our health.

a. What have you heard about this? (How chemicals in the environment affect our health?)

One way scientists find out more about the impact of chemicals on people's health is through a process called biomonitoring. This video describes a little bit more about biomonitoring and who conducts it. Please watch and we'll talk about it after.

[PLAY VIDEO SEGMENTS] http://www.cdc.gov/biomonitoring/flash/presentation_popup.html

OVERVIEW – SUBSECTION 1: BIOMONITORING

OVERVIEW – SUBSECTION 6: THE MODEL-BIOMONITORING

b. What is biomonitoring?

c. Who is doing this biomonitoring?

d. What is the purpose of biomonitoring? What does it tell us?

e. What are some ways biomonitoring is uncertain? What does it not tell us?

V. UNCERTAINTY EXAMPLE (LEAD) (10 MINUTES)

Let's keep watching the video. Here is an example of how biomonitoring can impact public health.

[PLAY VIDEO] http://www.cdc.gov/biomonitoring/flash/presentation_popup.html

MAKING A DIFFERENCE – SUBSECTIONS 1—5 (ABOUT LEAD)

So this is an example of how biomonitoring measured exposure to lead and was able to confirm that removing lead from gasoline reduced the public's exposure to lead. However, it took 20 years and a lot of careful research. The results that showed dramatic decreases in blood lead levels following the removal of lead from gasoline removed a lot of uncertainty about how the public was exposed to this chemical.

But there are new chemicals coming onto the scene all the time. Now let's talk about a chemical that has been in the news a lot lately, bisphenol A, or BPA.

a. What have you heard about BPA?

VI. UNCERTAINTY EXAMPLE (BPA) (20 MINUTES)

Here is something CDC is developing about BPA. Keep in mind that this document is a bit technical is in its very beginning stages. Please read though and underline things that talk about uncertainty related to the impacts of BPA on our health.

READ CDC HANDOUT ON BPA – UNDERLINE WORDS THAT TALK ABOUT UNCERTAIN SCIENCE

a. What did you underline?

b. When you see information that includes uncertainty like this, what do you think about the research?

- Do you think scientists draw different conclusions about the health effects of BPA?
- Do you think the information provided here is the best available at present?
- Do you think it possible for scientists to have all the answers about BPA?

- Does more scientific work need to be done on the topic?

c. What is your impression of the CDC? [PROBE ON TRUST]

  - Do you think they are withholding information from the public?
  - Is the CDC unsure about the amount of BPA the public is exposed to?
  - How do you think CDC feels about the safety of BPA?
  - Do you think the CDC lacks definite knowledge about how BPA affects our health?

d. After having read this, is there any additional information you'd like?

VII. FINAL EXERCISE [5 minutes]

Based on what you've seen here from CDC, write a postcard to a loved one that tells them something they should know about BPA.

THANK YOU!!!!

APPENDIX A. Selected Transcript Sections- Biomonitoring: Making a Difference

Section 2: Overview

Subsection: Biomonitoring

These days, it's virtually impossible for people not to come into contact with hundreds of chemicals each day—whether those chemicals are in our food, air, water, soil, dust, or the products we use. And it's even more difficult for people to know if those chemicals are harmful to their health or not. That's why the work being done at CDC's Environmental Health Laboratory is so important.

For at least three decades, scientists here have been determining which environmental chemicals people have been exposed to and how much of those chemicals actually gets into their bodies. This technique is known as biomonitoring. Biomonitoring measurements are the most health-relevant assessments of exposure because they measure the amount of the chemical that actually gets into people, not the amount that may get into people.

Our laboratory operates CDC's National Biomonitoring Program, which specializes in biomonitoring. The measurements we make support these essential steps to prevent disease or death caused by people's exposure to toxic substances:

Detect and monitor exposures.
Assess people's health risk as a result of exposure.
Develop and implement interventions that reduce exposure.
Evaluate how effective those interventions are.

Subsection: The Model - Biomonitoring

With biomonitoring, we can get actual measurements of the levels of environmental chemicals in people, making it the most health relevant way of assessing exposure.

Biomonitoring avoids errors resulting from the inaccuracy of interpreting environmental levels (that are measured in air, soil, water, or food) and personal recall as a way to estimate exposure. There are limits to the use of biomonitoring. It provides a snapshot in time of a person's exposure to environmental chemicals. But because of differences in individual genetic makeup, the nature of the chemical that gets into the body, and other factors, the metabolism and excretion of environmental chemicals vary from person to person.

It's also important to know that just because people have an environmental chemical in their blood or urine does not mean that the chemical causes disease. There's an old saying that "the dose makes the poison." We know that small amounts of some chemicals may be of no health consequence, but larger amounts may cause disease. For some chemicals, such as lead, research studies have given us a good understanding of health risks associated with different levels of lead in blood. But for most chemicals, we have more questions than answers. That's why more research is needed to determine whether exposure to chemicals at the levels we measure in the U.S. population are cause for concern.

Section 4: Making a Difference

Subsection: Biomonitoring in Action

Chemicals are part of the everyday modern world. From the shampoo we use to the pan we cook in and the computer we work on, we are exposed to hundreds of chemicals every day. They can enter our body through drinking .. eating .. breathing… even through contact with our skin. Some of these chemicals may not make us sick or cause disease, but others can cause serious health problems.

The biomonitoring work being done at CDC's Environmental Health Laboratory plays an important role in understanding this exposure and what part these chemicals play in our nation's health. Let's look at some examples of biomonitoring in action….

Subsection: A Decline in Lead Use

CDC's Environmental Health Laboratory has been measuring lead levels in the population for many years. Lead poisoning can affect nearly every system in the body. It can cause learning disabilities, behavioral problems, and, at very high levels, seizures, coma, and even death.

Our information about lead levels in the U.S. population resulted in the rapid removal of lead from gasoline in the United States and prompted research that showed similar relationships of gasoline lead to blood lead levels in other countries. This information also resulted in the removal of lead in gasoline in almost every industrialized nation.

Subsection: What Biomonitoring Found

From 1976 through 1980, overall use of lead in gasoline declined as a result of the introduction of unleaded gasoline. Unleaded gasoline was introduced because lead interfered with the operation of catalytic converters in automobiles. In 1981, the U.S. Environmental Protection Agency, or EPA, was considering regulatory changes that would allow increasing the amount of lead in leaded gasoline because lead was an inexpensive octane booster.

Environmental monitoring data and modeling predicted that leaded gasoline had little effect on blood lead levels in people. But results of CDC's second national survey, covering the years 1976 through 1980, showed that declines in actual blood lead levels measured in people matched declines in levels of lead in gasoline, 10 times more than predicted from environmental modeling.

This critical finding was a major consideration in EPA's decision to further restrict the use of leaded gasoline. As remaining lead was removed from gasoline, lead levels continued to decline. By 1999, blood lead levels in children one to five years old had fallen to historic lows.

Gasoline lead levels continued to decline through 1991. Biomonitoring measurements taken from 1988 through 1991 showed blood lead levels continued to decrease as gasoline levels declined.

Subsection: U.S. Children 1-5 Years of Age with High Blood Lead Levels

Now that lead is out of gasoline, the most common source of children's exposure to lead is dust from older homes that contain lead-based paint. Lead-based paints were banned for use in housing in 1978. However, about 24 million homes in the United States still contain leaded paint and lead-contaminated house dust.

Children are particularly susceptible to lead exposure because of normal hand to mouth activity. The Report showed that 2.2% of children between 1 to 5 years old had blood lead levels that were of concern. This figure is down from the 4.4% in the early 1990s and dramatically lower than the 88% of children who had unacceptable blood lead levels in the late 1970s.

Subsection: U.S. Children 1-5 Years of Age with High Blood Lead Levels

Biomonitoring has been an essential tool in helping public health officials identify exposure to lead, track lead levels over time, determine groups at highest risk for lead poisoning, and assess how well programs aimed at reducing or eliminating exposure to lead actually work. The data collected through biomonitoring gave the EPA the crucial scientific human evidence it needed to accelerate the removal of lead from gasoline.

Biomonitoring continues to arm public health officials with the information they need to focus prevention efforts on children who are at high risk for lead exposure.

Biomonitoring enables public health officials to:

- Identify exposure to lead
- Track lead levels over time
- Determine groups at highest risk for lead poisoning
- Assess the effectiveness of intervention programs

Complete data on blood lead levels are available in CDC's Second National Report on Human Exposure to Environmental Chemicals.

APPENDIX B. CDC's Working BPA Factsheet

Bisphenol A

General Information

Bisphenol A (BPA) is a chemical used for over 50 years to make polycarbonate plastics, epoxy resins (surface coatings and bonding), and thermal paper (changes color when exposed to heat).

Polycarbonate plastics are used in some:	Epoxy resins are used in some:
• compact discs • auto parts • baby bottles • plastic cups and plates • eyeglass lenses • toys • safety equipment	• linings of food cans • linings of wine vats • coatings of kitchen appliances • paints • floorings • dental sealants

In recent years, worldwide producers of BPA made 5-6 billion pounds annually. BPA may enter the environment from industrial sources or from product leaching (coming out), disposal, and use. In 1999–2000, BPA was found in 41.2% of 139 U.S. streams in 30 states. BPA can break down and does not build up significantly in plants and animals that live in water.

People may be exposed to BPA by eating foods and drinking beverages that came from containers made with BPA. For small children, hand-to-mouth and direct oral contact with materials containing BPA are possible. Exposure from indoor air is a small part of total exposure estimates. BPA passes quickly through the human body, which usually removes it within a few days.

Some studies suggest that low and high levels of BPA may cause changes in reproductive and nervous system development in animals. However, the effect of BPA on the health of people at low levels of exposure in the environment or low levels in the body is unknown. Occupational exposure of workers to BPA dust may cause eye and skin irritation. BPA is not likely to cause cancer.

BPA in the U.S Population

Scientists measure BPA in human urine to estimate how much has entered the body. In 2003-2004, a national health survey included measuring for BPA and other chemicals in the urine of participants. The survey found BPA in the urine of nearly all of the people tested. This indicates widespread exposure to BPA in the U.S. population.

Finding BPA in the urine does not mean it will hurt your health. Studies on levels of BPA provide doctors and public health officials with reference values so they can learn if people have taken in higher amounts of BPA than the general population. These data can also help scientists plan and conduct research on exposure and health effects.

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