From the Lab to the Field: Preliminary Results and Next Steps in Field Testing the National Health Interview Survey Audio Computer-Assisted Self-Interviewing Module

James M. Dahlhamer, Ph. D.
Senior Specialist in Survey Methods
Division of Health Interview Statistics
National Center for Health Statistics

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National Center for Health Statistics
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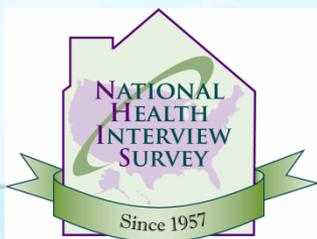
Overview

- ❑ Brief overview of the National Health Interview Survey (NHIS)

- ❑ Brief overview of audio computer-assisted self-interviewing (ACASI)

- ❑ Field Test I
  - Results
  - Revisions to procedures/ACASI design

- ❑ Field Test II
  - Preliminary results
  - Revisions to procedures/ACASI design

- ❑ Plans for the third and final field test

National Health Interview Survey

❑ Multi-purpose household health survey

❑ In-person interview with some telephone follow-up

  ▪ Computer-assisted personal interviewing

❑ Interviews performed by trained interviewers with the U.S. Census Bureau

❑ Interviews conducted in roughly 35-40,000 households each year

National Health Interview Survey, cont.

❑ Household respondent provides basic socio-demographic information on all members of household

- For each family within a household:

  - knowledgeable adult 18 or older responds for him/herself and all other family members

  - *sample adult* 18 or older and *sample child* under age 18 randomly selected for more extensive set of questions

Adding Sexual Identity Questions to the NHIS

- ❑ U.S. Department of Health and Human Services announces plans to begin collecting health data on lesbian, gay, bisexual, and transgender (LGBT) populations by 2013

  - ▪ Need to better understand the health of sexual minorities
  - ▪ Evidence of health disparities

- ❑ Extensive development and testing effort by the NCHS Questionnaire Design Research Laboratory (QDRL)

  - ▪ Develop prototype ACASI module

Audio Computer-Assisted Self-Interviewing (ACASI)

- ❑ Participants listen and respond to pre-recorded questions using headphones attached to a computer; can simultaneously read the text on the screen

  - ▪ Enhanced privacy; believed to result in more complete and accurate reporting on sensitive topics

  - ▪ High levels of literacy not required (questions presented aurally and visually)

  - ▪ Consistency in administration

NHIS ACASI Module

❑ Developed in Basil

   ▪ Alternative data entry program for Blaise questionnaires
   ▪ Designed to handle self-interviewing
   ▪ Allows programmers to create tailor-made applications

❑ Make the interface as simple as possible
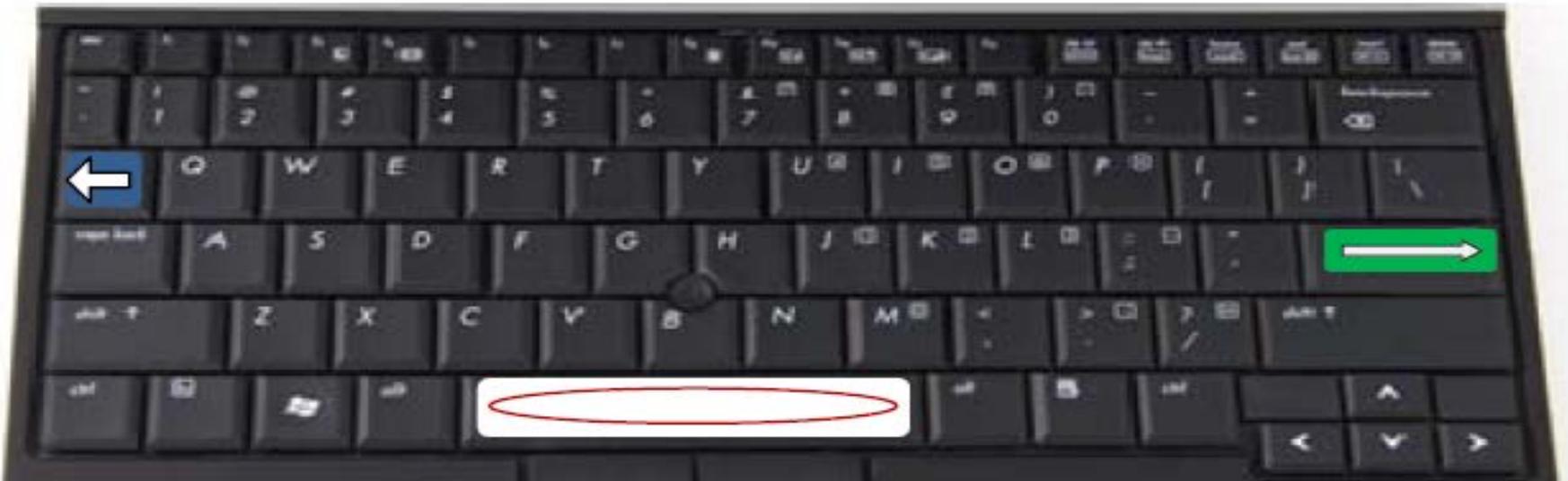
Example Question

Do you think of yourself as:

Gay

Straight, that is, not gay

Bisexual

Something else

I don't know the answer
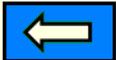
⬅️ ⭕ **circles your answer** ➡️

Content of ACASI Module: Field Tests I and II

❑ In order of appearance:

- Practice questions
- Computer use (1 question)
- Satisfaction with health care (1 question)
- Height and weight (2 questions)
- Living arrangements (2 questions)
- Ancestry (2 questions)
- Sexual identity (7 questions)
- Financial health (8 questions)
- Sleep (5 questions)
- Mental health (7 questions)
- HIV/AIDS (1 question)
- Alcohol consumption (5 questions)

Field Test I

❑ Goals:

- Successful integration of ACASI with NHIS CAPI instrument
- Test audibility of sound files, synchronization of visual and audible questioning
- Observe interactions/transitioning of technology between interviewer and respondent
- 50 completed interviews

❑ Plans/Procedures:

- Conducted during November 2011
- Sample drawn from 6 counties in MD and VA
- 6 Census interviewer given 2 weeks to complete 8-9 interviews
- Full-day classroom training at Census headquarters
- Normal data collection protocols suspended

Field Test I, cont.

❑ Select findings:

- 50 complete interviews
  - 27 observed by Census and NCHS staff
- Intro/transition to ACASI split over two screens; created confusion for both interviewer and respondent
- ACASI EXIT screen included an instruction that was incompatible with respondent training
- Some interviewers had difficulty placing covers on headphones
- Some interviewers not clear on the purpose of ACASI
- About 10.5 minutes on average to complete the module
- PROBLEM: Instrument froze or shut down in 3 cases causing ACASI data to be lost

Field Test II

❑ Goals:

- Test ACASI using normal NHIS interviewing procedures
- Successful incorporation of Spanish translation
- Obtain feedback from respondents and interviewers
- Test refinements to module based on first test
  - Consolidated intro/transition screen; revised EXIT screen
- 500 completed interviews

❑ Plans/Procedures:

- Conducted in April 2012
- Sample drawn from areas with concentrations of Spanish speakers
- ~100 interviewers given full month to complete assignments
- Two one-day classroom trainings: Crystal City, VA, and Phoenix, AZ
  - Greater emphasis on rationale for using ACASI; more role-playing

Field Test II, cont.

❑ Select findings:

- 533 interviews where all or some of ACASI completed
  - 415 in English, 118 in Spanish

- Sexual identity items appeared to work well

- User interface worked well for a wide range of respondents

# Respondent Debriefing Question: Problems Using Keys to Select Answers

	% Yes
Overall	3.1
Education	(χ^2 p-value = <.0001)
Less than high school	11.4
High school/G.E.D.	0.0
Some college/AA degree	1.6
Bachelor's +	1.5
Computer Use	(χ^2 p-value = <.0001)
Never/almost never	11.1
Some days	4.1
Most days	1.5
Every day	0.5

Field Test II, cont.

❑ Select findings:

- 533 interviews where all or some of ACASI completed
  - 415 in English, 118 in Spanish

- Sexual identity items appeared to work well

- User interface worked well for a wide range of respondents

- Successful consolidation of intro/transition screens

- Respondents preferred headphones over earbuds

- About 12 minutes on average to complete the module

- Though minor, instrument freezes persisted

- Difficulties differentiating break-offs from Enter without answering

- Elevated item nonresponse in ACASI, particularly for numeric entry fields

Comparison of Item Nonresponse Rates between NHIS ACASI Field Test Cases and 2011 NHIS Production Cases: Field Test II

Bar chart comparing ACASI (red) and CAPI (dark blue) item nonresponse rates across survey items: Height, Weight, Sleep, Sad, Nervous, Restless, Hopeless, Effort, Worthless, Feelings interfere, HIV test, 12+ drinks in past year, 12+ drinks in lifetime, # of days you drank, How many drinks, 5+ drinks. Y-axis ranges from 0% to 25%.

Legend: ACASI, CAPI
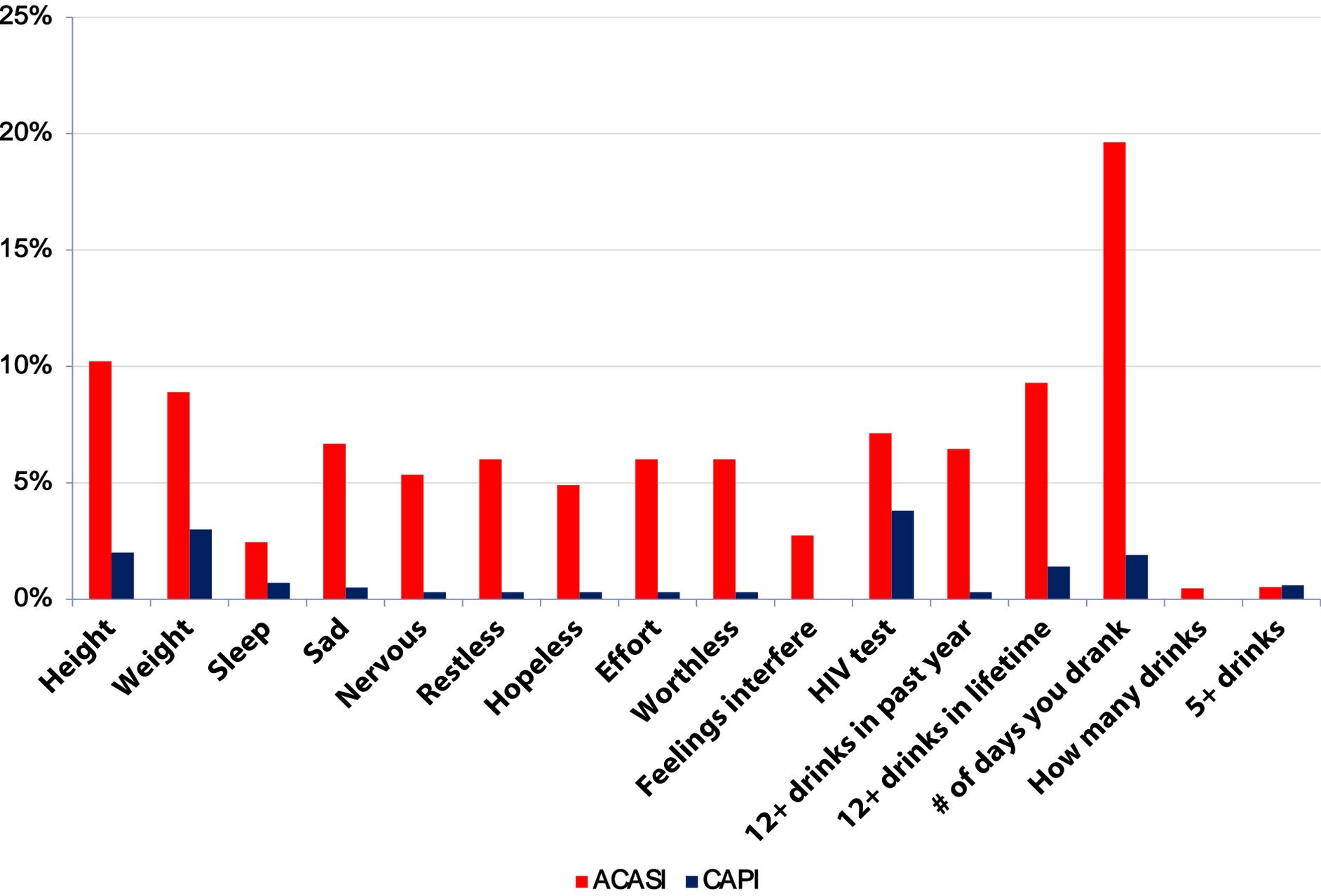
Example Question: Field Tests I and II

These next questions are about drinking alcoholic beverages. Included are liquor such as whiskey or gin, beer, wine, wine coolers and any other type of alcoholic beverage.

In any one year, have you had at least 12 drinks of any type of alcoholic beverage?

Yes

No

I don't know the answer

I don't want to answer

circles your answer

Example Question: Field Test III

NHIS ACASI v1.00 PROTOTYPE

These questions are about you and your neighborhood.

How often do you use a computer?

Never or almost never

Some days

Most days

Every day

circles your answer

Follow-Up Screen When Respondent Presses Enter Without Selecting a Response

You did not enter an answer for the question. That is because you:

Made a mistake and would like to have another chance

Are not sure how to answer

Do not want to answer

⬅️ ⬭ **circles your answer** ➡️

Item Nonresponse Rates for Select Items in the NHIS ACASI Module:
Field Test II (items listed in order of appearance from left to right)

Legend: ■ Did not answer ■ Refused ■ Don't know
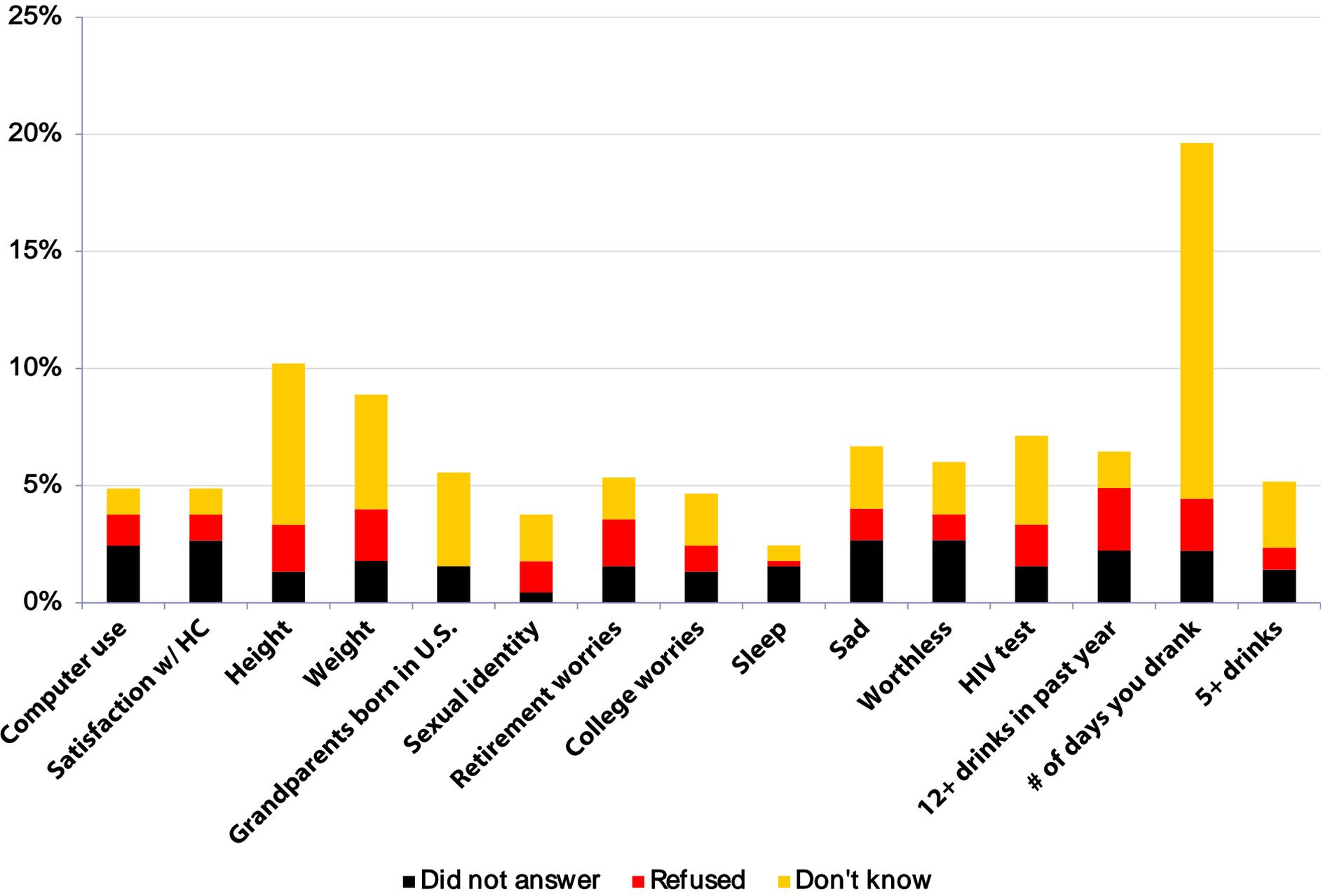
Field Test III

❑ **Goals:**

- Conduct full dress rehearsal
- Obtain prevalence estimate of sexual minorities
- Split-ballot of ACASI (n=3,000) vs. CAPI (n=2,000)
  - Compare prevalence estimates, item nonresponse rates, break-offs
- Compare CAPI/ACASI test cases to production interviews
  - Explore context effects; impacts on trends

❑ **Plans/Procedures:**

- Data collection began August 1 and concludes September 30
- Nationally-representative sample
- ~470 Census interviewers
- Two one-day classroom trainings: Arlington, VA, and Kansas City, MO

Content of ACASI Module: Field Test III

❑ In order of appearance:

- Practice questions
- Computer use (1 question)
- Satisfaction with health care (1 question)
- Neighborhood tenure and social capital (5 questions)
- Sexual identity (8 questions)
- Financial health (8 questions)
- Sleep (5 questions)
- Mental health (7 questions)
- HIV/AIDS (1 question)

Stay Tuned…

❑ Will be analyzing Field Test III data on a flow basis

❑ Results will determine use/content of ACASI/CAPI for 2013

❑ Questions?

James M. Dahlhamer
fzd2@cdc.gov

Interviewer Debriefing Question:
Level of Assistance Provided to R During ACASI

	% Some/A lot
Overall	32.2
Age	(χ^2 p-value = <.0001)
18-24	13.9
25-44	21.3
45-64	33.3
65+	63.1
Education	(χ^2 p-value = <.0001)
Less than high school	51.5
High school/G.E.D.	32.0
Some college/AA degree	29.1
Bachelor's +	20.2
Computer Use	(χ^2 p-value = <.0001)
Never/almost never	76.7
Some days	35.6
Most days	16.2
Every day	16.2

Respondent Debriefing Question:
Listen to All, Some, or None of Recordings

	% All/Some
Overall	77.7
Language of ACASI Interview	(χ^2 p-value = <.0001)
English	73.2
Spanish	92.4
Education	(χ^2 p-value = .0108)
Less than high school	88.8
High school/G.E.D.	80.8
Some college/AA degree	74.4
Bachelor's +	70.9
Computer Use	(χ^2 p-value = .0109)
Never/almost never	84.1
Some days	79.5
Most days	86.4
Every day	70.2

Respondent Debriefing Question:
Important for This Part of Interview to Be Private

	% Yes
Overall	58.5
Sex	(χ^2 p-value = .0299)
Male	52.8
Female	63.1
Race/Ethnicity	(χ^2 p-value = .0024)
Hispanic	68.1
Non-Hispanic white	49.7
Non-Hispanic black	55.0
Non-Hispanic other	72.0
Language of ACASI Interview	(χ^2 p-value = <.0001)
English	52.5
Spanish	78.2

Interviewer Debriefing Question:
Level of Assistance Provided to R During ACASI

	% None	% Some	% A lot
Overall	67.8	22.7	9.5
Age	(χ^2 p-value = <.0001)		
18-24	86.1	11.6	2.3
25-44	78.7	18.0	3.3
45-64	66.7	23.6	9.7
65+	36.9	36.9	26.2
Education	(χ^2 p-value = <.0001)		
Less than high school	48.5	28.9	22.7
High school/G.E.D.	68.0	25.0	7.0
Some college/AA degree	70.9	22.8	6.3
Bachelor's +	79.8	16.3	3.9
Computer Use	(χ^2 p-value = <.0001)		
Never/almost never	23.3	44.4	32.2
Some days	64.4	32.9	2.7
Most days	83.8	14.7	1.5
Every day	83.8	13.1	3.0

Respondent Debriefing Question:
Listen to All, Some, or None of Recordings

	% All	% Some	% None
Overall	53.6	24.1	22.3
Language of ACASI Interview	(χ^2 p-value = <.0001)		
English	44.3	28.9	26.8
Spanish	83.8	8.6	7.6
Education	(χ^2 p-value = <.0001)		
Less than high school	78.7	10.1	11.2
High school/G.E.D.	60.6	20.2	19.2
Some college/AA degree	46.3	28.1	25.6
Bachelor's +	38.8	32.1	29.1
Computer Use	(χ^2 p-value = <.0001)		
Never/almost never	73.2	11.0	15.9
Some days	69.9	9.6	20.5
Most days	56.1	30.3	13.6
Every day	37.6	32.7	29.8

Sexual Identity Questions, cont.

By <u>something else</u>, do you mean that…

You are not straight, but identify with another label such as queer, trisexual, omnisexual or pansexual

You are transgender, transsexual or gender variant

You have not figured out or are in the process of figuring out your sexuality

You do not think of yourself as having sexuality

You do not use labels to identify yourself

You made a mistake and did not mean to pick this answer

You mean something else

← **circles your answer** →

Example Question