

An Approach to Minimizing Problematic Data in an ACASI Sexual Behavior Assessment

Lance M. Pollack, Ph.D.
CAPS Methods Core Presentation
April 15, 2011

Exploring the Core of High Risk Networks (SexNet)

- PIs Diane Binson and Bill Woods
- Survey of men exiting two SF sex clubs (N=459)
- Two-stage, time probability, cluster sample
- March – August 2007
- Identify “high risk” men (i.e., men who visit other sex venues besides the recruitment site, including the Internet) for subsequent in-depth interview
- Sexual behavior during visit and prior 3 months

Minimize Problematic Data

- Refuse to answer
- Don't know
- Inconsistent responses (e.g., more anal sex partners than sex partners)
- “Uncoded affirmative” (e.g., many, a lot, etc.)
- Inappropriate inclusions (and, by inference, inappropriate exclusions)

Typical Question Sequence

- Have you had sex with a man in the last 3 months?
- Have you had anal sex with a man in the last 3 months?
- Have you had receptive anal sex in the last 3 months?
- Have you had receptive anal sex without a condom in the last 3 months?
- When you had receptive anal sex without a condom in the last 3 months, did your partner cum inside you?

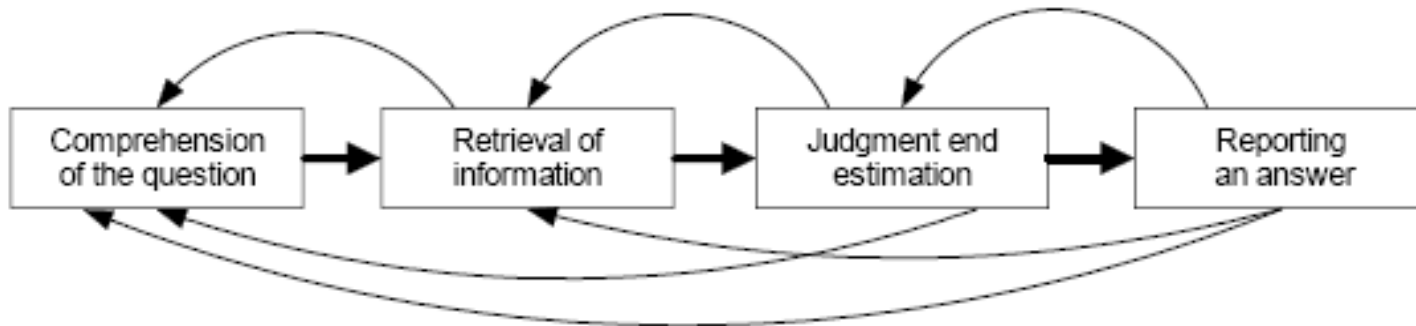
Standard Question-Answer Response Model



Components of the Response Process

Component	Specific Process
Comprehension	Attend to questions and instructions Represent logical form of questions Identify question focus (information sought) Link key terms to relevant concepts
Retrieval	Generate retrieval strategy and cues Retrieve specific, generic memories Fill in missing details
Judgment	Assess completeness and relevance of memories Draw inferences based on accessibility Integrate material retrieved Make estimate based on partial retrieval
Response	Map judgment onto response category Edit response

Response Model With Feedback



SexNet Data Collection

- Definitions given verbally, hardcopy given to respondent to keep and use
- Modular laptop with headphones
- Practice session (95% skipped)
- Question about time entered club
- Definition review (95% skipped)
- # men had sexual contact with during club visit (first question in sexual behavior assessment)

Definition of Oral Sex

- Any time you put your penis in a man's mouth, and any time a man puts his penis in your mouth
- Counts even if no one had an orgasm
- Counts even if just for a moment

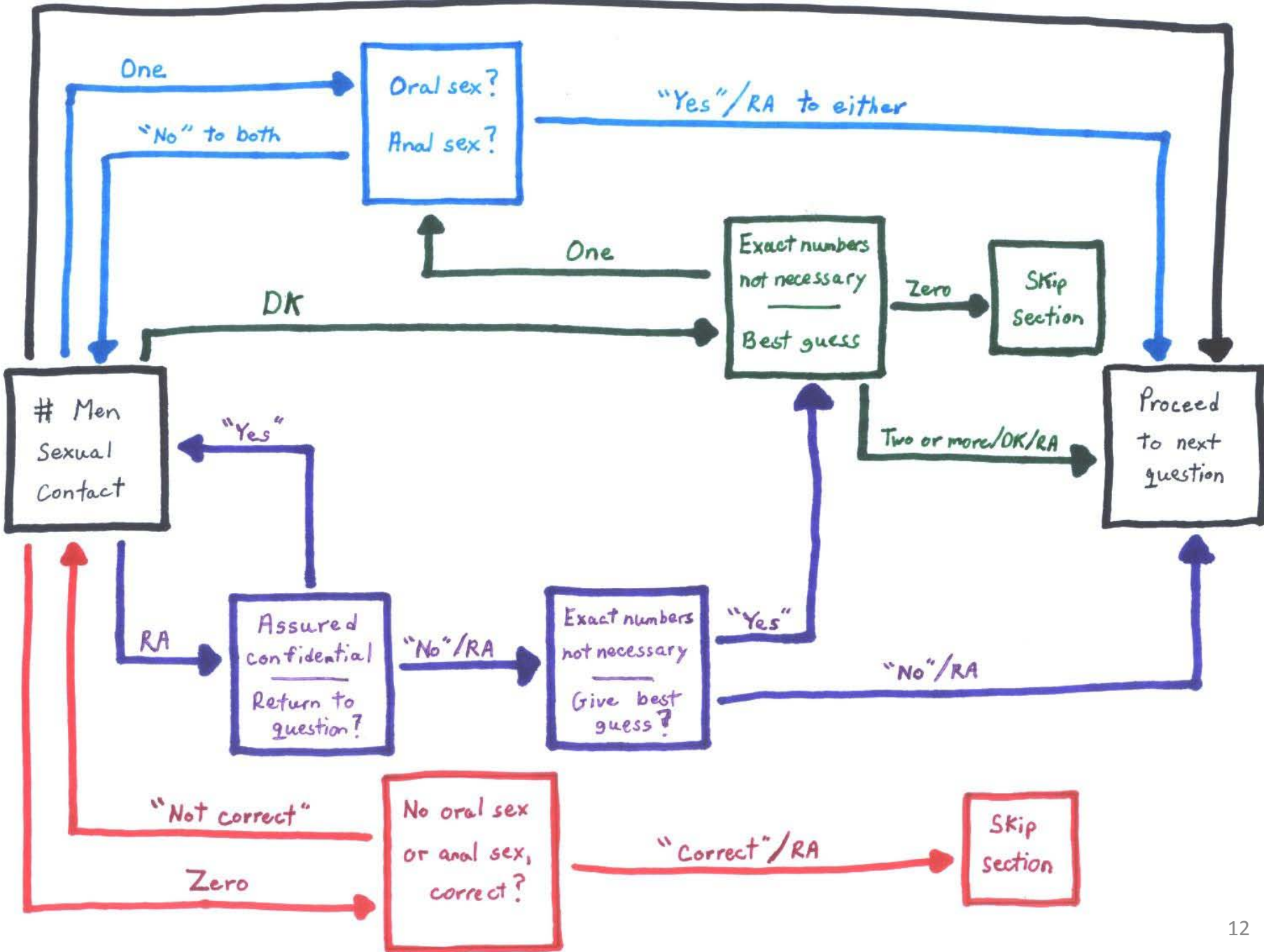
Definition of Anal Sex

- Any time you put your penis in a man's anus (insertive anal sex), or a man puts his penis in your anus (receptive anal sex)
- Counts even if no one had an orgasm
- Counts even if just for a moment

Definition of Sexual Contact

- Oral sex or anal sex
- Counts even if no one had an orgasm
- Counts even if just for a moment

Two or more



11 Visit Behaviors (* = interval-level guess only)

- # men sexual contact
 - # men oral sex
 - # men performed oral sex on R
 - # men R performed oral sex on
 - # men anal sex
 - # men insertive anal sex (DEF)
 - # men insertive with condom [without condom]*
 - » # men came inside*
 - # men receptive anal sex (DEF)
 - # men receptive with condom [without condom]*
 - » # men came inside R*

9 Behaviors Last 3 Months (* = interval-level guess only)

- # men sexual contact (DEF)
 - # men oral sex*
 - # men anal sex*
 - # men insertive anal sex (DEF)
 - # men insertive with condom [without condom]*
 - » # men came inside*
 - # men receptive anal sex (DEF)
 - # men receptive with condom [without condom]*
 - » # men came inside R*

Results

- Data from 20 questions
- 38/459 cases (8.3%) had initial problems giving a valid numeric response
- Those 38 cases invoked “alternate pathways” 51 times
 - 19 (37.3%) returned to the original field and gave a corrected numeric response
 - 13 (25.5%) gave a numeric “best guess”
 - 9 (17.6%) gave an interval-level “best guess”
 - 10 (19.6%) remained missing data

Sexual Contact During Visit

- 15 cases used alternate pathways
- 11 responses of one partner failed verification (0 oral, 0 anal), changed response to zero
- 1 zero response failed verification, changed response to 1
- 1 DK response remained DK
- From 2 RA responses got 1 numeric response and 1 numeric best guess

Sexual Contact Past 3 Months

- 17 cases used alternate pathways
- All 9 DK responses gave a numeric “best guess”
- Of 4 RA responses, 2 gave a numeric “best guess”, 2 remained RA
- 3 responses of one partner failed verification, changed response to zero
- 1 response of one partner failed verification, changed response to zero, failed that verification, changed response to two

Benefits of Using Alternate Pathways

- 63% (numeric) to 80% (yes/no) resolution of problematic data
- Almost two-thirds of the instances of problematic data occurred when answering the initial “root” questions (sexual contact), so resolution probably limited the accumulation of additional problematic data that arises with misclassification

Strategies Used

- Verified responses with follow-up questions
- Did not take non-response lying down
 - reminded respondents that answers were confidential
 - encouraged respondents to do their own imputation
- Checked for numeric inconsistencies
- Used neutral, “permission giving” language to encourage response (e.g., “Sometimes men use condoms when they have anal sex, and other times they don’t.”)
- Preemptively asserted operational definitions of key terms

Costs of Using Alternate Pathways

- Mapping out the pathways was labor intensive
- The text (non-interactive) version of the survey instrument is extremely hard to follow
- Significant additional ACASI programming time is required
- Additional time is needed to beta-test the programming
- Additional time is needed for data cleaning post data collection

Recommendations

- If having a numeric response, an accurate response, and/or a consistent response is of paramount importance, then alternate pathways is one means of achieving that
- Studies with smaller sample sizes (e.g., clinical studies, intervention evaluations), where avoiding problematic data means avoiding big analytic problems, alternate pathways may be a solution
- Key “root” questions are strong candidates for using alternate pathways

Two or more

