Electronic Data Capture in the MTN

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Presentation Overview

- ACASI/CASI – intro and rationale for use
- Measuring adherence
- Electronic data capture in current MTN trials
- Lessons learned to date
- VOICE and behavioral data capture
- Electronic Data Flow
- FDA compliance requirements

What is ACASI/CASI?

- ACASI=Audio Computer Assisted Self-Interview (CASI = ACASI without the audio)
- Respondents hear and/or read survey questions programmed in local language
- Graphics/images used, may be site-specific
- Touch screen responses
- Mobile devices may be used (e.g., laptop or PDA)

Why use ACASI/CASI?

- Research indicates interviewing methods affect answers to sensitive questions
- Over-reporting of adherence most likely occurs in microbicide clinical trials
  - Affects adherence data, which is collected via participant self-report
- Studies suggest that use of ACASI increases reporting of socially undesirable behaviors

Measuring Adherence

- Adherence difficult to measure in microbicide trials because:
  - Participants may be embarrassed to report about sexual behavior and condom use to an interviewer
  - Participants may be unwilling to report non-use given enrollment requirements and intensive product adherence counseling
  - Biomarkers of adherence are not readily available and/or greatly increase logistics of trial

Measuring Adherence

- Example – in HPTN 035 women reported
  - >80% adherence to gel use during follow-up
  - 55% condom use at baseline

- Rates of condom use at last sex act from national surveys:
  - Malawi DHS 2000: 5%
  - South Africa DHS 1998: 12%
  - Zambia DHS 2001-2002: 12%
  - Zimbabwe DHS 1999: 9%

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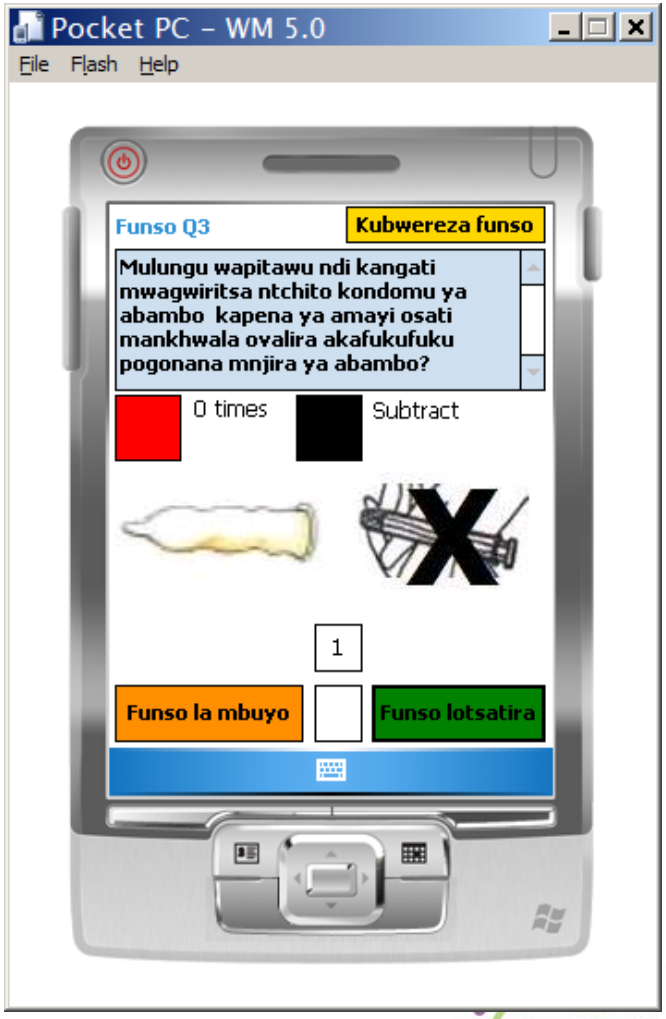
Electronic data capture in current MTN Trials

- HPTN 035b
  - ACASI via handheld PDAs
  - Limited to subset of 10 questions (re-administering questions from CRF)
- MTN 004
  - CASI via web-based questionnaires



Lessons learned to date: Pictorial ACASI via PDA in HPTN 035B

- ACASI programming takes time
  - audio files for each language
  - questions, answers, branching and prompts, and consistency checks time consuming to program
- Pretesting and training at the sites vital – graphics very useful
  - Even numerically-literate women preferred clicking on the picture
  - Graphics helpful for recall of questions after the audio script stops
  - Most women reported liking ACASI for confidentiality and feeling more comfortable answering sensitive questions.
  - Field pre-testing the ACASI program is crucial - version we took to the sites is different from the one we brought back – new images, new colors…
  - Color choices not always cross-culturally relevant (ie no green, yellow in some languages)
  - Instructions take time – should shorten when used in FU's
- Limited subset of ACASI questions feasible with shorter study timelines

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Other Lessons learned to date

- Incorrect data entry of key fields may result in missing data
  - Examples:
    - Input of wrong visit code/date
    - Input of wrong PTID
- Other MTN trials will be using ACASI
  - MTN-005
  - Lessons learned will benefit VOICE

VOICE (MTN 003)

- Phase IIb safety and effectiveness trial of oral Truvada, oral TDF, and vaginal PMPA gel.
  - Daily use of oral or vaginal product
  - Trial may lead to registration
- 7-10 sites in sub-Saharan Africa with 7-10 different languages
- N~4200 women
- Follow-up period: up to 35 mos (min of 14 mos)
- Anticipated date of first enrollment: January 09

VOICE-Behavioral Data Capture

- Two methods of data collection:
  - Monthly face-to-face interview, with participant responses recorded on case report forms (CRFs)
  - Quarterly ACASI
- Some questions may be asked on CRFs ***and*** via ACASI
  - Ensures that adherence data is captured
  - CRF data FDA compliant
  - Discrepancies between CRF and ACASI data expected and ***not*** reconciled

VOICE-Behavioral Data Capture

- CRF data (participant self-report)
  - # sex acts and condom use in past week
  - Condom use with last sex act
  - Vaginal hygiene practices
  - Frequency of product use in past month
  - Product use in past week
  - Reasons for missed/extra doses
- CRFs will also capture pill and applicator counts of returned, unused study product

VOICE-Behavioral Data Capture

- ACASI data collected:
  - # sex acts and condom use in past week using 7-day retrospective calendar
  - # and type of sex partners in past 3 months
  - Anal sex in past year (asked annually)
  - Exchange of money/goods for sex in past year (asked annually)
  - Motivation for using PrEP (e.g., perceived risk of self and partner)
  - Product use in past week using 7-day retrospective calendar
  - Product use with last sex act
  - Partner knowledge of and support of study participation
  - Ease/difficulty of product use, including effects on sexual activity
  - Sharing of study product

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VOICE: Electronic Data Flow

- Each study day that ACASI is used, site staff will:
  - transfer the data from a mobile device to the primary database saved on a desktop computer
  - backup the source data to storage media, such as a CD
  - store backup offsite
  - upload a copy of the source data to a secure web server maintained by SCHARP, WA, USA.

FDA Compliance Requirements

- PRO = Patient Recorded Outcome
  - ePRO = electronic Patient Recorded Outcome
- FDA draft Guidance on PRO (covers ePRO)
- Guidance explains how FDA evaluates PRO instruments
- Emphasis on “validation”, i.e., ensuring the instrument measures what it is supposed to measure, correctly
- FDA requires sponsors to:
  - state what they are going to do
  - justify what they are going to do
  - document what they do

FDA Compliance Requirements

- Sponsor must account for differences between ePRO & PRO validation, including:
  - programming decisions
  - presentation of assessment
  - changes in the task required of respondents

Other FDA Compliance Issues

- 21 CFR Part 11: Electronic Records and Signatures
- Guidance for Industry: Computerized Systems Used in Clinical Investigations
- Guidance for Industry and FDA Staff: General Principles of Software Validation
- These regulations cover:
  - location of source records
  - data protection
  - integrity of software

Some of the many next steps …

- Finalize the ACASI and CRF adherence content for VOICE
  - Programming/audio needs to start at least 6 months prior to study initiation
- Engage the FDA
  - Provide them the ACASI/CRF adherence data collection plan
  - Get feedback

Acknowledgements

MTN is funded by NIAID (5U01AI068633), NICHD and NIMH, all of the U.S. National Institutes of Health