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## Introduction

To reduce interviewer bias and encourage more respondent participation, SEATEC used an Audio Computer Assisted Self Interview (ACASI) system. ACASI systems generate computer administered surveys. Programmed survey questions and response options are read aloud by the ACASI system as participants follow along on the screen, then participants select responses using a mouse. The Questionnaire Development System (QDS) allowed the team to design and conduct the survey, while warehousing the collected data. The use of this system reduced staffing requirements for data collection and eliminated the need for data entry, while allowing clean data export for analysis. Although beneficial in many aspects, there were challenges met in using the software as well as barriers encountered by respondents completing the 2011 Atlanta EMA Consumer Survey.

## Materials and Methods

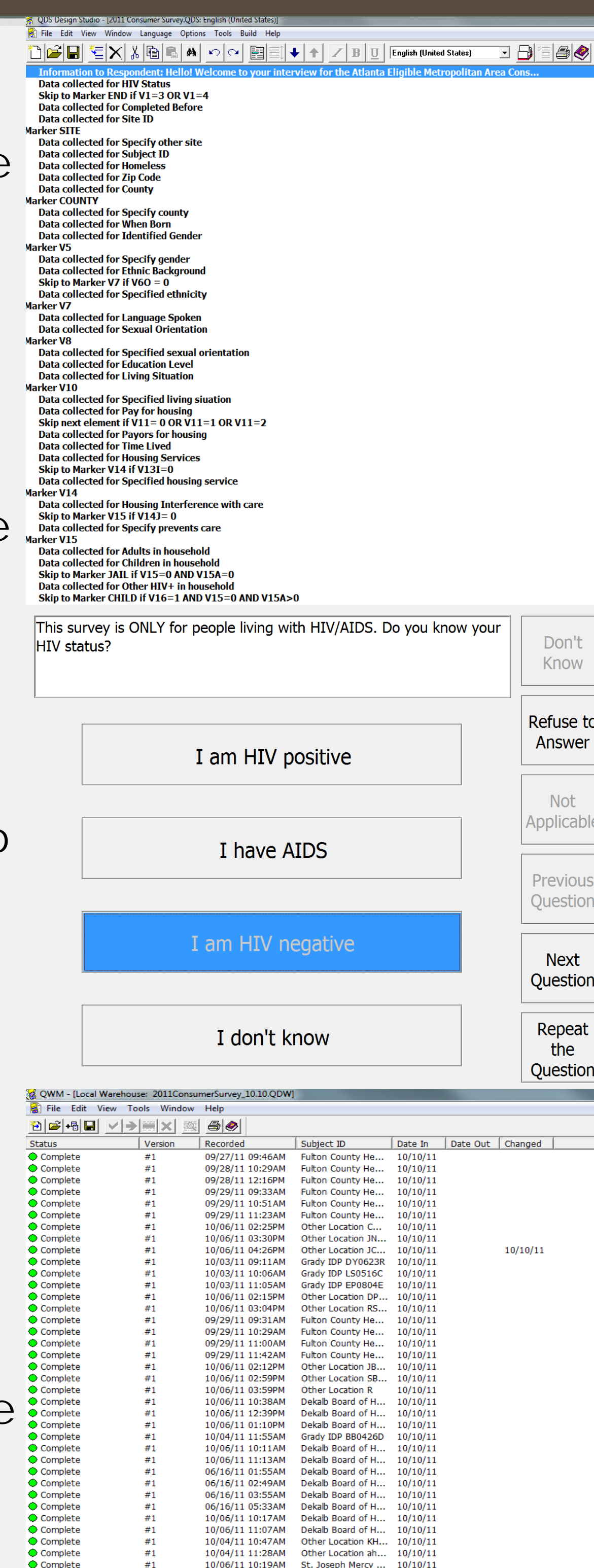
To conduct an ACASI survey using QDS, it required designing the survey, collecting the data, and exporting the data for analysis. This was accomplished through use of three distinct programs: Design Studio, ACASI, and the Warehouse Manager.

The Design Studio was used to program the questionnaire with the desired format and skip patterns and allowed the designer to guide the respondent to a specific response choice or pattern, such as choose one answer, select all that apply, or must respond/optional response.

The following step involved conducting the surveys by having respondents navigate through the pre-designed questions using the ACASI interface. This allowed users to not only read the survey questions on a simplified screen, but to listen to the questions and answers throughout the survey.

Finally, after the survey was conducted, the data collected was saved to a flash drive and opened on a desktop where the Warehouse was stored. The Warehouse shows all data collected and interprets whether the data collected is complete, incomplete, or duplicated. This phase allows for the removal of incomplete surveys or those that were completed by the same individual, if necessary.

Data was then exported from the Warehouse Manager to SPSS for analysis. QDS also allows for export to other analysis software programs, such as SAS or Access.



QDS Design Studio, Warehouse, and ACASI

## Results

### Strengths of ACASI Use for HIV Research

- Allowed for more respondents to participate
- Reduced interviewer and social desirability response bias, especially where there were sensitive or personal questions that may have led to respondent discomfort
- Provided a level of privacy as respondents completed survey
- Reduced funding and time for training that would have been necessary for an increased number of interviewing staff
- Data is warehoused and exported into a format that allowed for easy data analysis and virtually eliminated the need for manual data entry.

### Barriers of ACASI Use for HIV Research

- Health literacy of respondents (i.e., terminology used to refer to providers and/or services)
- Computer literacy - some respondents had trouble with using a mouse or touchpad to navigate through survey, or were completely uncomfortable with using a computer
- Computerized voices pronounced words that were difficult for some respondents to discern
- Because this was a self-interview, respondents had the option not to respond to some questions, which may have left their survey largely incomplete
- Without an interviewer, some respondents did not ask for assistance (although available) with survey questions they did not completely understand; respondent misunderstanding could be gleaned from the totality of responses viewed during analysis

## Lessons Learned

- People are generally more familiar with touch screen technology even if they are not computer literate. For example, touch screen technology is used in grocery store self check-outs and ATM machines. Using touch screen technology is recommended to compensate for the many respondents who may be computer naive.
- A self-check program should be run when respondents have completed the survey to immediately determine if there are skipped questions or other problems with the data that could be resolved in real time while the respondent is available for follow-up query.
- Terms that are familiar to the local population under study should be incorporated as much as possible throughout the survey, such as primary care vs. outpatient care, or doctor vs. primary care provider. The language used by the Part A continuum of care for a specific EMA that is common to consumers in that area should be tested prior to implementation of the survey.