

# Summary of Literature on Alternative Methods of Donor Interviewing

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# Introduction

- Talisman produces the Quality Donor System <sup>TM</sup> (QDS) an audio video touch screen computer assisted self-interviewing system (AVT-CASI)
- Partially supported by National Heart Lung & Blood Institute Grant HL61111
- Priority of DHHS Five Point Plan

# Overview

- Summarizes scientific literature not reported in AABB Streamlining Task Force report or CBER's draft guidance on self interviewing
- Shows audio-CASI technologies to be superior to paper & face-to-face interviewing with regard to literacy, truthfulness on socially & legally sensitive questions, clarity, donor satisfaction & likelihood of return and error reduction

# Earliest CASI Blood Donor Study

- 272 blood donors previously screened and accepted by routine Red Cross written questionnaires or face-to-face interviews
- 12 donors reported HIV risk behaviors or symptoms when re-interviewed using conventional computer assisted self interviewing (traditional CASI, no audio, no touch screen).

Locke et al. JAMA. 1992;268:1301-05

# Literacy Issues

- Printed and electronic questionnaires presume donor literacy and illiteracy is a large, often hidden problem in the US.
- According to Census 2000 > 31 million US residents are foreign born, 52% are from Latin America, and 21 million speak English less than "very well."

# “Health illiteracy” (1 of 2)

- Nearly *half* of all Americans may struggle with understanding basic healthcare information.
- 90 million individuals cannot accomplish common healthcare related procedures such as following prescription instructions, reading test results or completing insurance forms.
- 67% of patients with reading difficulty have never told their spouse about the problem

<http://www.ama-assn.org/ama/pub/category/8577.html>

# “Health illiteracy” (2 of 2)

- If 2 of 3 “health illiterates” hide the deficiency from spouses, how do blood center staff to detect it?
- Doesn't it make more sense to use technology to prevent or minimize reading problems?

# Blood donor illiteracy?

Health literacy in 1014 Baltimore adults 18-45 - Rapid Estimate of Adult Literacy in Medicine (REALM) to assess validity of written SAQs in social science research

- 18% of subjects with “some college or a 2 yr degree” were reading at levels of 8th grade or below
- This “some college or 2 yr degree” group is sometimes cited as typical of blood donors
- Provides “important evidence for the potential benefits of audio computer assisted self-interviewing technologies.”

Al-Tayyib AA et al. *AJPH*. 2002;92(9):1478-81



# Paper vs. Audio-CASI – Impact on provision of sensitive\* information

	Paper SAQ (%)	Audio- CASI (%)	Crude OR	Adjusted OR
Any MSM	<b>1.8</b>	<b>5.3</b>	<b>3.03</b>	<b>3.22</b>
IDU ever	<b>0.3</b>	<b>4.5</b>	<b>14.11</b>	<b>16.67</b>
Ever had sex with prostitute	<b>0.7</b>	<b>2.5</b>	<b>3.65</b>	<b>4.24</b>
Used crack or cocaine past year	<b>0.9</b>	<b>5.7</b>	<b>6.67</b>	<b>7.15</b>

Turner, CF et al. Science. 1998. 280:867-873

\* 18 of 49 AABB UDHQ questions can be judged as sensitive

# Advantages of A-T-CASI

- Useful for any respondent who can hear
- No requirement for literacy
- Programmable in any spoken language
- Standardizes presentation and pace; every respondent hears the same thing
- Provides automated skip and branching patterns to guide respondents through complex interviews
- Clean data files

# Privacy & user friendliness keys to high quality data on sensitive topics

- Use of audio touch screen-CASI (A-T-CASI) to obtain data on sensitive topics from a sample of 108 STD clinic patients
- 2 to 1 general preference for A-T-CASI vs. keypad A-CASI and interviewers
  - Seen as the most private by 2 to 1 margin
  - A-T-CASI has the potential to "yield more accurate recording of responses."

# Quality Donor System <sup>TM</sup> (QDS) AVT-CASI

- Headphone audio –
  - Spanish version in development
- Touch screens – no training required
- Color pictures to highlight questions – unique to QDS
- On-screen text
- AABB UDHQ questions
- Staff review mode with flags
- Two electronic databases

# Mississippi Valley Regional Blood Center QDS

- Implemented for over a year at MVRBC
- Deployed in 9 MVRBC fixed locations
- Utilized in over 30,000 donor interviews
- Product of 10 years of R&D, \$2.5 M investment
- Donor module = 56 AVT-CASI screens plus four others



# Medical History

## Question 4

Are you feeling well and healthy today?



Laurie Rogenski, RN



Feeling Well?

Back

Yes

???

No

Next

# Medical History

## Question 24



Laurie Rogenski, RN

**Male donors: Have you had sex with another male, even once, since 1977?**



Male-Male Sex?

Back

Yes

???

No

Next



# Medical History

## Question 23A



Laurie Rogenski, RN

Have you ever used a needle, even once, to take drugs that were not prescribed by a doctor?



Self-injected Drugs?  
Used a Needle?

Back

Yes

???

No

Next

# Medical History

## Question 14B

Since 1980, have you ever lived in, or traveled to Europe?



Laurie Rogenski, RN



Europe Stay?

Back

Yes

???

No

Next

## Staff Review

Click on question to review.

- ▼ -Needs Review
- ✓ -Acceptable After Review by Staff
- ⚠ -Aberrant After Staff Review
- ✓ -Answer Acceptable
- ✗ -Donor Deferred
- Black-N/A

Donor: 233  
Gender: Male

Reviewer Login: admin

- |                              |                                 |                                |                                |
|------------------------------|---------------------------------|--------------------------------|--------------------------------|
| ✓ <a href="#">Question 1</a> | ✓ <a href="#">Question 10D</a>  | ✓ <a href="#">Question 18</a>  | ✓ <a href="#">Question 26B</a> |
| ✓ <a href="#">Question 2</a> | ✓ <a href="#">Question 10E</a>  | ✓ <a href="#">Question 19</a>  | ▼ <a href="#">Question 27A</a> |
| ✓ <a href="#">Question 3</a> | ✓ <a href="#">Question 10E1</a> | ⚠ <a href="#">Question 20A</a> | ✓ <a href="#">Question 27B</a> |
| ▼ <a href="#">Question 4</a> | ✓ <a href="#">Question 11</a>   | ✓ <a href="#">Question 20B</a> | ✓ <a href="#">Question 28</a>  |

brain covering) graft?

Y 15C  N Have you or any of your blood relatives ever had Creutzfeldt-Jakob disease or have you ever been told that your family is at an increased risk for Creutzfeldt-Jakob disease?

Y 16  N In the past 12 months, have you had close contact with a person with yellow jaundice or viral hepatitis, or have you been given Hepatitis B Immune Globulin (HBIG)?

Y 18  N In the past 12 months, have you received blood or had an organ or tissue transplant or graft?

anyone who was born in or lived in any African country since 1977?

Y 31  N In the past 12 months, have you been in jail or prison?

Y 32 N Have you read and understood all the donor information presented to you, and have all your questions been answered?

Accepted  Deferred

Signed  
\_\_\_\_\_

**Comments:** Q4. Not feeling well, may be low BP

**Privacy Comments:** Donor now understands

**Overall**

**Donation Comments:** Accepted for the donation

# AVT-CASI – QDS

- Donor Refusals –
  - Hoxworth 1999 pilot\* – 2 in 400
  - MVRBC 2001/2 – 1 in first 10,000
- MVRBC Donor Satisfaction – 1500 surveys – donors with a preference prefer QDS over FTF by at least a factor of 4 for:
  - clarity, privacy, truthfulness, time satisfaction, understanding and likelihood of re-donation

\* Zuck et al. Transfusion Dec. 2001

# AVT-CASI – MVRBC QDS

- Staff Satisfaction (N=21) – Those with a preference prefer QDS by a factor of 3 or more on variables:
  - faster for staff, donors more honest, answers more accurate, answers more confidential, fewer staff errors and personal satisfaction
- MVRBC also showed that QDS:
  - reduced errors/omissions by at least 60%
  - increased donor time by 4 min.
  - decreased staff time by 5 min.

# Significance

- An anonymous mail study of blood donors within two months of donation and 34,726 completed instruments reported by the REDS group
- “Individuals who do not respond accurately to questions about infectious disease risk factors at the time of blood donation represent a potential threat to the safety of the blood supply.”
- Results of analyses showed that 1.9% of donors report a deferrable risk unreported at the time of donation.
- Deferrable risk behaviors were 1.4 times higher for men than women and 1.6 times higher for first time than repeat donors

Williams, et al. *JAMA* 1997 Mar 26;277(12):967-72.

# Conclusion

- Donor interviewing should include a verbal or audio component, and that new, unfamiliar, questions in particular must be posed in one of these two modes.
- Medical-scientific literature supports stronger guidance from CBER encouraging the use of technologies that enhance understanding and honesty, e.g., AVT-CASI technology

<http://www.talmed.com/talisman/reference/index.htm> for more