Donors More Likely to be Candid with Touch-Screen Interviewing, Study Finds, *ABC Newsletter*, April 22, 2005

Donors prefer using an automated questionnaire over live interviewing, and the computer-based system provides blood centers with a better picture of any high-risk behaviors, according to a study published in the February issue of *Transfusion.* The touch-screen system also takes less time, offers more privacy, decreases the rate of errors and omissions, and increases the likelihood the person will donate again, survey data suggest.

A research team led by former ABC President Louis M. Katz, MD, who helped persuade the Food and Drug Administration to consider automated donor interviewing, conducted the study, which was a follow-up to a smaller pilot study at Hoxworth Blood Center reported in *Transfusion* in December 2001.

The Quality Donor System (QDS), manufactured by Vienna, Virginia-based Talisman Medical Systems, was installed in the spring of 2001 at the Mississippi Valley Regional Blood Center, where Dr. Katz serves as medical director. The QDS installation at MVRBC was the first documented use of the technology for routine blood donor interviewing. During the study period, more than 50,000 blood donors were interviewed with the system.

Since then, QDS has also been installed at several other America's Blood Centers member sites, including LifeShare Blood Centers, in Shreveport, Louisiana, LifeBlood/Mid-South Regional Blood Center in Memphis, Tennessee, and LifeLine/West Tennessee Regional Blood Center, in Jackson, Tennessee.

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>
> *– Sharron Strawn, LifeShare Blood Services*

The QDS system at MVRBC consists of a desktop computer running Microsoft Windows and equipped with touch-sensitive screens. Donors listen to the audio portion of the interview on headphones in a private booth. Printers produce a completed interview form once all required fields are filled. Generically known as audiovisual touch-screen computer-assisted donor self-interviewing (AVT-CASI), the system at the time asked 46 questions from the AABB Uniform Donor History Questionnaire (UDHQ).

Design and Measurement. To assess donor and staff perceptions of the system, the authors developed satisfaction surveys and conducted time studies comparing manual and automated systems. Five post-donation surveys involving more than 1,500 touch-screen donor interviewees were conducted at the center's main collection site and two satellite sites. In addition, 21 staff members were surveyed for their impressions of the system.

Deferrals for admissions of high-risk behavior were based on first-time donor responses to 15 socially sensitive and stigmatizing questions on the UDHQ. Control data were collected from 890 first-time donors interviewed face to face at the main collection site in the 12 months before QDS installation.

Along all dimensions assessed, donor and staff strongly preferred the automated system, the study found. Perhaps most importantly, the automated system increased the identification of high-risk behaviors and had lower error and omission rates than face-to-face interviews, audits revealed.

Results. First-time and repeat donors at MVRBC who gave the automated system a 1 or 2 ranking found it to be clear (91.8 percent), private (92.3 percent), more likely to elicit truthful answers (67.7 percent) and adequately time efficient (86.9 percent). Time efficiency presented the greatest difference from the pilot study, in which 64 percent of respondents said the time to complete the interview was satisfactory. Overall, donors preferred the system to live interviews by ratios ranging from about 7 to 1 to 11 to 1.

To Dr. Katz, the chief implication of the study is clear. "Happy donors are more likely to come back," he told the *ABC Newsletter.*

While donor interview time increased by four minutes using QDS, staff time declined by five minutes. The mean time for a face-to-face interview was 7.4 minutes, involving staff and donor, versus 11.2 minutes for the automated system, of which 6 minutes was actually used for completing the interview.

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Touch-Screen Interviewing (continued)

The deferral rate per 1,000 donors for high-risk behavior was 10.28 for the automated system versus 1.12 for live interviews. In discussing the system's genesis, the authors point to evidence from behavioral science literature, some cited in the study, that suggest computer-assisted interviewing may be superior to face-to-face and paper methods in eliciting responses to sensitive questions about a person's sexual or drug-use behavior. Such queries include: "In the past 12 months, have you given money or drugs to anyone to have sex with you?" and "Have you ever used a needle, even once, to take drugs that were not prescribed by a doctor?"

The error and omissions rate for the automated system was about 1.5 per 1,000 compared with 3.8 per 1,000 for the traditional system. "We're not having to go back as much to solicit new information or discard units or spin our tires asking why a question wasn't asked, etc.," Dr. Katz told ABC.

While acknowledging that staff time and error reductions probably save money, Dr. Katz said a formal cost analysis was not done. "We weren't implementing the system for the cost implications," he said. "Except insofar as it is [more cost-efficient] for a phlebotomist to be drawing blood rather than screening donors."

Another Center's Experience. Sharron Strawn, donor services manager for the Northern Region of LifeShare, said that overall, the center's experience with QDS and Talisman has been positive. LifeShare brings in about 150,000 collections a year, of which one-quarter are drawn at its fixed sites. For just short of a year, LifeShare's fixed sites have been using QDS.

Ms. Strawn said that at her center, any donor, even a repeat donor, who has not used the system before is treated as a first-time donor and must listen to each question in its entirety before answering. While that makes a donor's first automated session a few minutes longer than a live interview, a donor can complete the questions during subsequent sessions much faster. "And because the donor is participating in the system, they perceive that the process is shorter than a face-to-face interview," she said.

She agreed that staff time is also cut significantly, with staff focused mainly on reviewing answers and re-asking questions when there is an aberrant answer.

Gary J. Levy, MD, medical director of LifeShare, said that because the system does not allow a donor to complete the session until all questions are answered, omissions are virtually eliminated.

He reported some technical challenges getting a wireless version of the system to work at set-up blood collections (apparently caused by interference from other wireless networks), but he said that QDS has been a good, responsive vendor when problems arise and has been able to quickly integrate new FDA-mandated question changes.

Future Focus. Given the success of the two studies, and other centers' anecdotal reports, Dr. Katz said the industry should take a hard look at automated interviewing. At his center, future research will focus on return rates for donors who have used the automated system versus those who underwent face-to-face interviews, and donor reaction rate comparisons.

He also wants to develop a survey research module to do a much larger, more complicated study that "tacks one or two questions onto each donor questionnaire out of a set of 10 or so questions in a random fashion so that we could get a very large sample very quickly." The center is also investigating a wireless configuration of the automated system to take on mobile collections, as well as other enhancements such as integrated blood pressure monitoring equipment.

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