Internet Hosted Donor Screening

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Abstract

We implemented an audio video touch screen computer assisted self interviewing (AVT-CASI) system for US Food and Drug Administration (FDA) mandated screening of blood donors at a Western medical center. Rather than installing the software and server hardware on premises, we used a hosted version of the software provided by the software vendor. Results of the implementation have been positive and consistent with those reported by blood centers who implemented the same system in-house. By using the hosted approach, we saved implementation time as well as ongoing operational costs and efforts.

Objectives

Using a donor screening system running on a hosted internet site should eliminate a lot of the complexities of installing and maintaining private software, thus staff skills and effort needed should be substantially less. Such has proven to be the case with an audio video touch screen computer assisted self interviewing (AVT-CASI) system for US Food and Drug Administration (FDA) mandated screening of blood donors at a Western medical center.

This study sought to determine the extent to which theoretical benefits of Internet donor screening are achieved in practice. Theoretical benefits include reduced staff time for software installation and training and reductions in the number of units discarded because of incomplete donor health histories, missing donor signatures, or other errors such as those caused by illegible handwriting.

Methods

An AVT-CASI system for private in-house use at six community blood centers (CBCs) and at a medical center is also available on the Internet. A Western medical center recently implemented the system at two of their medical facilities. Staff training was provided via a webinar. In this case four “super users” were trained in 3.5 hours to the point they were confident they could train and mentor other staff as needed. Current CBC users were very helpful in putting the necessary management systems in place to operate the computer system successfully.

Computer workstations for donor screening were purchased for about $2,000 each. Because the software was provided by the vendor over the Internet, the medical center did not have to acquire, install or manage server hardware or software. Server and software maintenance are performed by the vendor. No down time has been experienced a result of scheduled maintenance.

Results

Implementation of the system went very smoothly with realization of all expected benefits. These include elimination of FDA reportable errors and more satisfied donors. In a total of only about a month after contracts were signed, management systems were installed, staff were trained and donors were being routinely processed.

The benefits of utilizing the system hosted on the internet are largely the same as they are for centers self hosting the system. That is, we've seen no evidence benefits are any different than as has been published in scientific journals1, 2, 3: human errors are reduced at least 60% to 70%, donors are more candid in acknowledging disease risky behavior, staff and donors prefer the AVT-CASI system much more than previous manual systems and staff interviewing time is reduced about five minutes per donor. Additionally, QC time at the end of the day was substantially reduced.

Donors processed are as follows.

Year	Count	Comments
2007	1155	From August inplementation
2008	3125	Full year
2009	2245	YTD through October 16

Blood Donor responding to Health History Questionnaire

Conclusions

Careful selection of software and hardware permit even small blood centers to realize the benefits of automating donor screening rather easily, i.e. a few hours of staff training and a few thousand dollars of hardware. From the perspective of user benefits, there is little difference between an AVT-CASI system operated by a blood center and one hosted by a service provider on the Internet. On the cost side of the equation, the costs in terms of staff time and effort are much less with an Internet hosted system. Benefits include near elimination of FDA reportable errors and reduction of staff training time to screen blood donors to FDA requirements.

References

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