Are users satisfied with single sign-on technologies in ER?

In the past few years, many healthcare-related applications and computers devices have been installed in healthcare settings. The regulatory requirements have driven the expansion of the electronic health record (EHR) and electronic structured data reporting. Activities traditionally on paper are now frequently performed on computer devices. These activities include documenting patient care assessments, treatments and entering orders, accessing laboratory results, reviewing radiology diagnostic study images, looking up past records in the archived medical record, interacting with clinical decision support assistance tools and calculators, procedure and document libraries, along with many other tasks using niche applications specific to the hospitals. Typically, every application requires a username and password with a pre-determined session inactivity timeout.

With every timeout or re-activation from a privacy mode screen saver, the end-user is required to enter their associated application username and password. Care providers have become overwhelmed with the need to remember several user names and associated application passwords when using computers to care for patients. On average, care providers have twelve different, unique login usernames and passwords to ensure the integrity of electronic healthcare data. One study reported that the traditional login methods and application timeouts caused 14.26 hours of lost productivity during the course of an eight hour shift, equating to $588,600 over the course of a year.

As a result, organizations started to look for applications that minimize the number of login credentials in their workflow. Single sign-on authentication alleviates the burden and cumbersome process of utilizing different user names and passwords for independent applications and reduces time spent in the application authentication process. Computer roaming is a complimentary capability that allows the user’s session to remain active while they move between shared workstations within a predetermined zone of networked devices. Single sign-on maximizes user convenience, promotes interoperability among applications, and re-coups lost productivity time associated with the login process, and ensure HIPPA compliance.

Single sign-on is promising and seems to solve the practical problems of password fatigue. Now the question is “are users of single sign-on satisfied with such technologies?” To assess the impact of single sign-on, we conducted a study in an integrated delivery network’s emergency departments after the single sign-on technology – HealthCast was implemented. We want to understand users’ perceptions of single sign-on technologies on ease of use and user satisfaction.

We used a survey to collect information on users’ attitudes and opinions on the use of HealthCast technologies. We wanted the actual users of HealthCast in five emergency departments to answer the survey. The users were physicians, allied health professionals, staff nurses, technicians, clerks and department management. We distributed 250 surveys to the five emergency departments and received 177 responses. The response rate was 70.8%. Majority of the survey respondents were

females working full-time in the nursing role. The response rate for female was 69.5% and for male is 25.5%. Seventy five percent of the respondents worked full time, 25% were part-timers and 7% were practice registered nurse. Users rated positively on the single sign-on system. Results from the survey showed that users are satisfied with the single sign-on technologies and they were willing to spread the word out and tell good things about the single sign-on systems to people they know. Our study also found care provider productivity were enhanced when utilizing HealthCast. We recommend the implementation of these technologies in other organizations for the purpose of decreasing workflow interruptions and increasing productivity of care providers.

Publication

Examining user satisfaction with single sign-on and computer application roaming within emergency departments.
Hope P, Zhang X
Health Informatics J. 2015 Jun