Usability

Meaningful use of electronic health records depends on usable and accessible systems.

Overview

Usability is "the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use" [ISO9241]. Usability represents an important yet often overlooked factor impacting the adoption and meaningful use of electronic health record (EHR) systems. Without usable systems, doctors, medical technicians, nurses, administrative staff, consumers, and other users cannot gain the potential benefits of features and functions of EHR systems.

Industry Need Addressed

The Health Information Technology for Economic and Clinical Health (HITECH) Act provides financial incentives and other support to drive the adoption and meaningful use of EHRs. A recent report funded by the Agency for Healthcare Research and Quality (AHRQ), however, identified key shortcomings among certified EHR vendors in the processes, practices and use of standards and best practices with regard to usability and human factors. Efficient and effective use of EHR systems is essential as these systems increasingly become a central tool for patient care.

NIST Approach

Building upon work in usability in other domains, NIST is performing foundational research to enable the development of usability standards for EHRs. NIST is collaborating closely with industry, academia, and other government agencies, including the Office of the National Coordinator for Health IT (ONC), AHRQ, the Food and Drug Administration (FDA), and the National Institutes of Health (NIH) to provide guidance in the development of health IT usability standards and measurements. To pursue these goals, NIST released a usability roadmap, designed to deliver specific, objective health IT usability standards and define rigorous testing methods to assess compliance. To help carry out the work defined in the roadmap, a public-private, multi-year program of research is developing a framework for measuring the usability of EHR systems and establishing usability and accessibility standards for systems to prevent critical errors and promote effective and efficient use by all end users. Closely related to usability, accessibility, if implemented in a well-defined way, has the potential to remove the barriers to using health IT systems for the 20 percent of our population who experience some form of disability. Promoting the use of accessibility standards on a voluntary basis will achieve a nationwide impact that is truly "welcoming" to all people.

Impact

Improved usability of EHR systems has the ability to impact both the rate of adoption and effective use in improving patient care.

For additional information, please visit http://www.nist.gov/healthcare/usability/index.cfm

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