Smartphone apps hold promise for electronic medical record matching, study finds

August 22 2018

Mobile phones and smartphones apps offer a promising approach to ensure that an individual's medical records when shared between different health care providers are matched correctly, according to a new RAND Corporation report.

Using such an approach will require a multi-part development effort to assure that the technology is usable and useful, and may require a governance process to ensure that the apps are trusted by both patients and health care providers, researchers say.

Mobile phones also may be used to "verify" a patient's phone number with their providers, and apps may be used as part of a check-in process before a medical appointment to send updated identity information.

The study, sponsored by the Pew Charitable Trusts, is the first national effort to look at the options for creating a patient-empowered approach to improve medical record matching when records are shared among health care providers.

"Tools and methods that allow an individual's mobile phone or smartphone to be used for improving medical record matching among different health providers appear to be particularly promising for a patient-empowered approach to the problem," said Robert S. Rudin, lead author of the report and an information scientist at RAND, a nonprofit research organization. "But these methods will require development and testing."

Electronic medical records have been adopted widely in recent years, creating the promise that all health care providers can easily access a patient's full medical history. Such sharing could improve the quality of care by decreasing duplicative tests and improving coordination.

But sharing records across different medical systems faces challenges when trying to match records for the same patient. A 2014 report by the federal Office of the National Coordinator for Health Information Technology suggested that when providers exchange records with each other, the success rate can be as low as 50 percent.

Record matching may fail when a patient has a common name or shares identifying details such as age and ethnicity with many other people. Typos in identifying information or when individuals change their names or addresses also are common causes of matching failures. Some experts suggest that patients could play a greater role in improving record matching.

RAND researchers investigated a wide range of approaches to patient-empowered record matching, from strategies such as creating a voluntary national identifier to using biometric data such as fingerprints or iris scans to improve matching. The work included a review of options by a panel of experts in the field.

The analysis determined that the wide saturation of mobile phones and smartphones provided a particularly promising opportunity to create a robust patient-empowered system.

Mobile phones and smartphone apps could use a variety of measures to confirm a patient's identity, allowing a hospital or other health provider to match records with a higher degree of certainty.

Key components to moving a mobile and smartphone-based solution

forward include developing technical specifications, developing prototypes to use in pilot programs, and establishing an organization to oversee progress, according to the report.

"We found no silver bullet for empowering patients to improve record matching," Rudin said. "Engaging patients in solving the problem likely requires real-world pilot testing and evaluation of an array of approaches."

  More information: The report, "Defining and Evaluating Patient-Empowered Approaches to Improving Record Matching," is available at www.rand.org

Provided by RAND Corporation

Citation: Smartphone apps hold promise for electronic medical record matching, study finds (2018, August 22) retrieved 7 May 2024 from https://medicalxpress.com/news/2018-08-smartphone-apps-electronic-medical.html