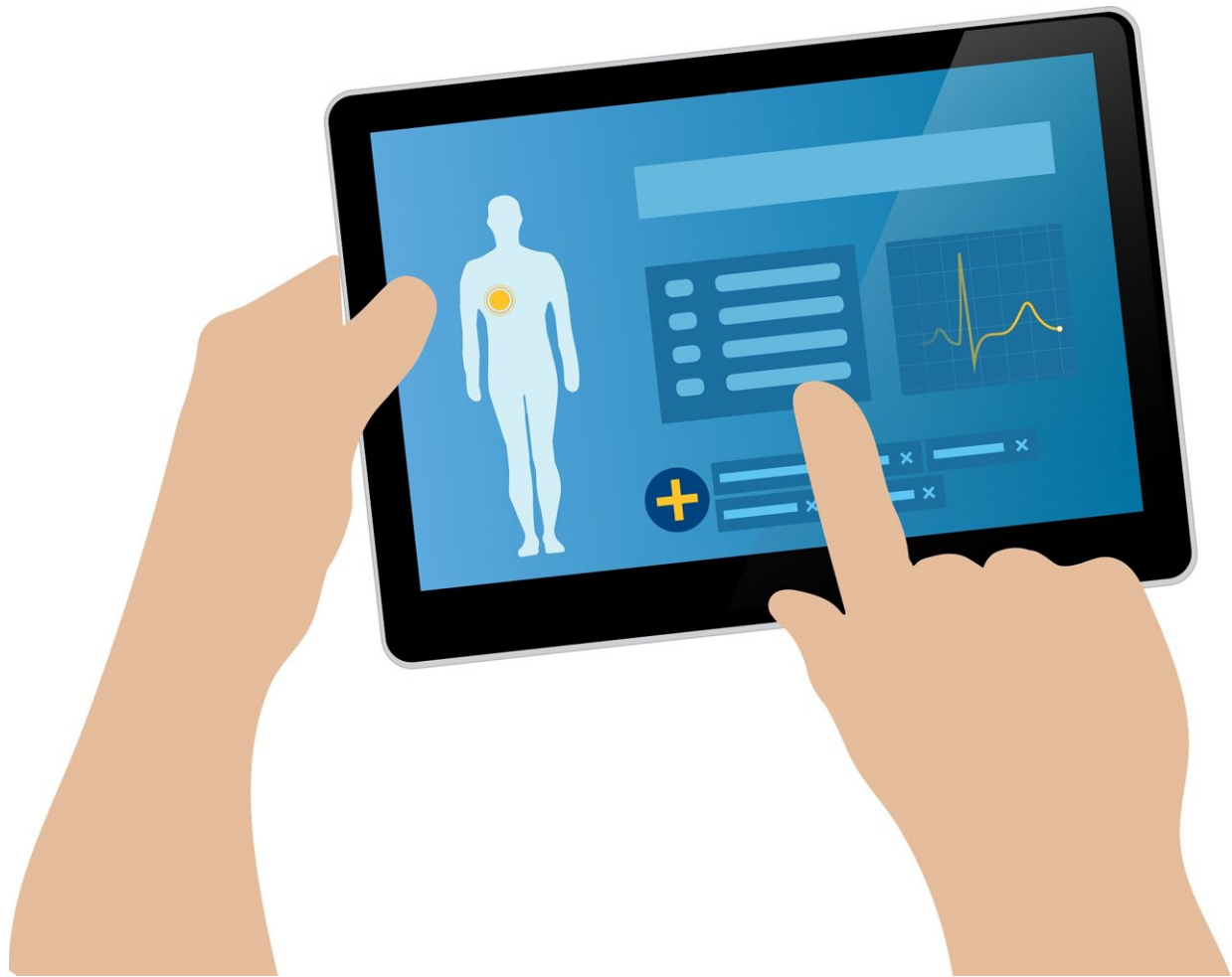


# Electronic health records may be key to improving patient care, study finds

September 20 2022, by Brian Consiglio

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When a patient gets transferred from a hospital to a nearby specialist or rehabilitation facility, it is often difficult for personnel at the new facility to access the patient's electronic health records—which includes important patient-specific information such as their medication history and allergies. This lack of electronic compatibility often leads to wasteful and expensive duplication of tests, X-rays and paperwork that can interfere with the treatment of patients.

A recent study at the University of Missouri highlights how the use of electronic health records have resulted better quality of care—which can direct the next steps of government programs to ensure hospitals use electronic health records in a way that promotes interoperability, or the ability for various health care organizations to quickly access a patient's records, reduce waste and speed up decision-making to improve patient health outcomes.

So far, the adoption and implementation of electronic health records has been a bumpy road, said Kate Trout, assistant professor in the MU School of Health Professions and lead author on the study. Electronic health records have widely been cited in research literature as the most cumbersome technology ever implemented in the [health care industry](#).

"They have the potential to be very helpful, but in practice they tend to be very disruptive because it's time consuming to train personnel how to use them. They're expensive, and there's always new complicated updates and new forms that come out, and there is often a lack of interoperability for the data to be shared among different health care organizations," Trout said. "Given the massive national investments, we wanted to see if electronic health records are being utilized in a meaningful way to promote interoperability and ultimately improve quality of care."

More than \$30 billion has been invested by the federal government in

the adoption and use of electronic health records by health care organizations in an attempt to improve the quality of care delivered to patients.

In 2011, Centers for Medicare and Medicaid established the "Meaningful Use" program—now known as the "Promoting Interoperability Program"—which offers financial incentives to health care providers who effectively utilize electronic health records in a way that promotes information sharing, public health reporting and interoperability.

Trout analyzed the impact of electronic health records on [mortality rates](#) for patients with various medical procedures and conditions. More than 5 million patients in 300 U.S. hospitals were included in the study, which merged large datasets from the electronic health records, the American Hospital Association and Centers for Medicare and Medicaid.

Three main categories emerged: hospitals that meet the "Meaningful Use" requirements with their electronic health records, hospitals that fully implement electronic health records but not in a way that meets the "Meaningful Use" requirements, and hospitals that have either none or only partially implemented electronic health records.

Trout found that the hospitals that meet the "Meaningful Use" requirements were able to improve quality of care and reduce patient mortality rates to a greater extent than hospitals in the other two groups. While the results show some optimism, Trout cautions that more still needs to be done, including the need to analyze the impact of interoperability and advanced electronic health record functions on quality of care.

"This research highlights the importance of using electronic health records in a way that promotes interoperability to streamline processes,

speed up decision-making, reduce wasted time and ultimately improve patient health outcomes," Trout said. "Ideally, the United States could implement one standardized electronic health records system for everyone to ensure compatibility, so policy makers can hopefully benefit from this research."

Trout added that with the use of data mining and analytics, electronic health records can be better used going forward to potentially identify patient characteristics that put them at higher risks for possible infections or other conditions.

"With this information, are there alerts we can put in after a surgery to ensure we follow up at critical points in time?" Trout said. "Are there certain patient populations that we can use the data to catch them earlier and make sure we give them extra care and not just put them through the same routine protocols as everyone else? That is how we move away from only focusing on implementing the technology and progress toward encouraging innovative ideas that ultimately improve patient health outcomes."

Trout said this research can be particularly useful for rural hospitals that historically have less resources and lag behind their urban counterparts in adopting health technology like telehealth and electronic health records. There have been many closures of rural hospitals, an issue that has been worsened by the COVID-19 pandemic, and rural patients tend to have more co-morbidities and worse health outcomes.

"I am passionate about helping vulnerable, underserved populations, and our personal health is often tied to where we live and various social determinants of health," Trout said. "Those ideas are not incorporated into our clinical data yet, but they should be going forward. My overall goal is to harness the data in a way that we can hopefully start to spend less and get more."

"The impact of [electronic health records](#) and meaningful use on inpatient quality" was published in *Journal for Healthcare Quality*.

**More information:** Kate E. Trout et al, The Impact of Electronic Health Records and Meaningful Use on Inpatient Quality, *Journal for Healthcare Quality* (2021). [DOI: 10.1097/JHQ.0000000000000314](https://doi.org/10.1097/JHQ.0000000000000314)

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