U. of C. Medicine, Google hope to use patterns in patient records to predict health

May 20 2017, by Lisa Schencker, Chicago Tribune

As a patient, your electronic medical record contains a wealth of information about you: vital signs, notes from physicians and medications.

Doctors use that information to track your medical history and keep tabs on you in the hospital - but what if they could also use it to predict your future health?

It's an idea inching closer to reality.

This week, Google announced it's teaming up with University of Chicago Medicine to research ways to use machine learning to predict medical events - such as whether someone will be hospitalized, how long that hospitalization will last and whether a patient's health is deteriorating. Google has formed similar partnerships with Stanford Medicine and the University of California at San Francisco.

Google and university researchers will try to discover patterns in patients' medical records but the records used in the research will be stripped of personally identifiable information to protect patient privacy.

"There's so much health care data, especially with electronic health records being adopted over the last 10 years," said Katherine Chou, who's leading the project for Google Research. "The potential for using that data for predictions, people haven't really figured out how to harness it."

University of Chicago Medicine has spent years working on ways to use data to predict health events. Researchers developed an algorithm called eCART that uses patient data to predict cardiac arrest, and if a patient is high-risk, nurses will perform extra checks on the patient. University of Chicago already uses eCART on its adult patients.

Dr. Michael Howell, the medical center's chief quality officer, said he's confident eCART has helped reduce instances of cardiac arrest, but he said researchers are still collecting data on its effectiveness.

The partnership with Google will help expand on such work, said Dr. Samuel Volchenboum, director of the Center for Research Informatics at University of Chicago Medicine.

Chou said Google team members met the University of Chicago's Howell at a Harvard University medical training program, and Google saw how its ability to organize data and make it accessible could apply in health care.

It's too early to tell whether Google could potentially develop a product or service using the technology, Google spokesman Jason Freidenfelds said in an email. At this point, Google is focused on demonstrating that the approach can improve patient care, he said.

Chicago company Quant HC has already commercialized eCART, selling it to hospitals, including Amita Health Alexian Brothers Medical Center and some of NorthShore University HealthSystem's hospitals, said Dr. Dana Edelson, who helped develop eCART at the University of Chicago and is now CEO of Quant.

"If you do more preventative care, then you have a win-win situation," Chou said.

Citation: U. of C. Medicine, Google hope to use patterns in patient records to predict health (2017, May 20) retrieved 10 April 2024 from https://phys.org/news/2017-05-medicine-google-patterns-patient-health.html