There is lots of health data out there, how can it be used it to improve health care?

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Regenstrief Institute investigators experienced in the use of data to improve health care and its delivery in resource constrained environments will introduce attendees at MedInfo 2015 to open source options for health information exchange and data analysis.

Regenstrief investigator Shaun Grannis, M.D., associate director of the institute's Center for Biomedical Informatics, and colleagues will present a workshop on OpenHIE, an international health information interoperability initiative supported by a growing community of governments, organizations, companies and individuals from around the world. Dr. Grannis, associate professor of family medicine at Indiana University School of Medicine, is OpenHIE's chief architect, spearheading overall design.

Medinfo 2015, short for the 2015 World Congress on Health and Biomedical Informatics, takes place in São Paulo, Brazil from August 19 to 23. It brings together researchers, clinicians, educators, and students to exchange ideas and contribute to the latest developments, innovations, and global trends in the rapidly advancing, multidisciplinary field of health and biomedical informatics.

In another session, Regenstrief investigator Jon Duke, M.D., and colleagues will demonstrate an open-source framework for large-scale data analytics in healthcare. Using these tools, health care providers, regulators, insurance companies, and others will be able to analyze their own observational health data, including information contained in

electronic medical records. Dr. Duke is the director of the institute's Drug Safety Informatics Lab.

"Ineffective data sharing impedes care quality and efficiency, impacting clinical outcomes," Dr. Grannis said. "Outbreaks like Ebola and H1N1 influenza highlight the importance of interoperable public health information to support timely, informed decision making.

"Health information exchange actually reflects a combination of social, economic and political challenges disguised as technical problems," Dr. Grannis said. He and the OpenHIE community work with various international stakeholders, including the Philippines, Rwanda, South Africa and Liberia to develop locally relevant health information exchange strategies.

De-identified health care data on large patient populations offers potential to find evidence-based answers to challenging questions about disease, health care delivery and the effects of medical interventions for individuals and populations.

"There is a lot of talk, even hype, about big data and health care, but you have to know how to use it," Dr. Duke said. "There are so many pieces involved—technical, scientific, political, business. It's difficult for almost any organization to take and embrace it, to turn busy, messy bunches of data into reliable, scientific evidence.

"We recognize that organizations need to keep their patient-level data private, yet by sharing results of analyses we can collectively generate evidence needed to propel healthcare advances. A common data model allows researchers across the world to perform collaborative research and reproducible science."

The Observational Health Data Sciences and Informatics analytics

platform developed by open source communities and presented by Dr. Duke can be integrated into commercial and locally developed medical record systems, and large scale health information exchanges including OpenHIE.

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