Novel K-anonimity algorithm safeguards access to data

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As electronic health records become more widely deployed, increasing amounts of health information are being collected. This data has many beneficial applications, such as research, public health, and health system planning. In a recent study, Dr. Khaled El Emam, the Canada Research Chair in Electronic Health Information at the CHEO Research Institute argues that there is a need for robust de-identification of patient data to avoid the negative impact that individual consent requirements have on studies using health record data for secondary purposes.

A systematic review just published by Dr. El Emam provides compelling evidence that in a wide variety of health research, consenters and non-consenters differ on important factors such as age, ethnicity, socio-economic background, language, religiosity, and where they live (urban vs. rural), to name a few. These differences in turn have a great impact on the results of health research, which requires consent, by introducing biases. However, health information can be used for such secondary purposes without consent if it is de-identified.

In the study titled "A Globally Optimal k-Anonymity Method for the De-Identification of Health Data" published in the *Journal of the American Medical Informatics Association*, Dr. El Emam presents a novel method for de-identifying health information.

"When patients are asked to provide consent, participation rates decline. This in turn impacts the process and outcome of the research itself" explained Dr. El Emam. "The new algorithm provides an answer to this

quandary by ensuring patient confidentiality at the earliest opportunity, thus safeguarding and facilitating access to a larger number of health records."

Source: Children's Hospital of Eastern Ontario Research Institute

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