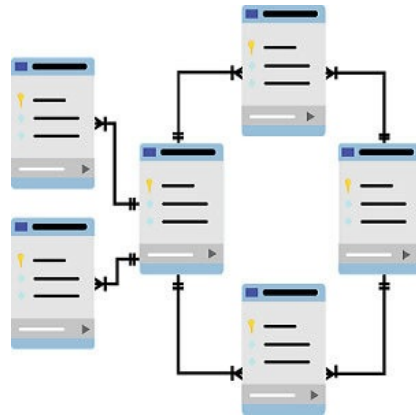# Mount Sinai's Database Integrates Clinical Imaging with EHRs

The Mount Sinai Health System's new Imaging Research Warehouse (IRW), developed by the Mount Sinai Translational and Molecular Imaging Institute (TMII), integrates clinical imaging with electronic health records. As the database expands, it will give researchers new access to information about more than one million Mount Sinai patients. The system ensures that the images, along with the corresponding health records, are free of patient identification.

Mount Sinai investigators from all areas of medicine can delve into any group of images from anonymous Mount Sinai patients with specific diseases or conditions to explore patterns and traits. By comparing thousands of similar images, researchers can find new features among those patient groups that they didn't know existed in hopes of identifying potential similarities in genetics or blood markers, that could lead to diagnostic techniques and cures.

"By having this imaging data available, we can find new patterns of disease and new ways to diagnose and develop new treatments," says Zahi Fayad, PhD, Director, TMII, Professor, Medical Imaging and Bioengineering, Radiology, and Medicine (Cardiology), Icahn School of Medicine at Mount Sinai.

The IRW is expected revolutionise clinical care and translational research to ultimately improve human health. In particular, the IRW has the potential to transform the field of radiology, and streamline the way radiologists read and collect data in the future. Feeding this large data set into machine learning algorithms, for example, will allow radiologists to use specialised software to help evaluate images for known abnormalities. In turn, this may allow for new and more accurate imaging techniques, such as shorter MRIs and CT scans, which will optimise imaging, streamline procedures, and improve the patient experience.

The IRW is a unique resource that will provide large volumes of de-identified images to the research community, according to David Mendelson, MD, Vice Chair, Radiology, Mount Sinai Health System; Professor, Radiology, Icahn School of Medicine at Mount Sinai. "This model fills a gap in the new world of healthcare 'big data.' The data contained within patients' radiological images is hard to make use of, and this warehouse is the solution to expose this information for analysis," the doctor points out.

Source: Mount Sinai Health System
Image Credit: Pixabay

Published on : Sun, 4 Jun 2017