UNC Health Care Uses IBM Analytics to Manage Medical Data and Improve Patient Care

IBM

IBM today announced that UNC Health Care [1] is using IBM big data analytics to help hospital workers reduce costly and preventable readmissions, decrease mortality rates, and ultimately improve the quality of life for patients.

Most healthcare organizations today are drowning in data and are challenged to gain reliable, actionable insights from information. In fact, more than 80 percent of an institution's data today is unstructured – meaning it cannot readily be collected and analyzed using standard methods. In healthcare, this is in the form of physician notes, registration forms, discharge summaries, phone calls, documents and more. In addition, medical literature is doubling every five years, making it difficult for clinicians to remain up-to-date with the latest scientific information.

Using an IBM Smarter Care [2] solution, UNCHC clinicians are able to quickly access and analyze this critical patient information using natural-language processing similar to what's used in IBM Watson [3] technology. With the ability to see and interpret both structured and unstructured data, UNCHC can now identify high-risk patients, understand in context what is causing them to be hospitalized, and then take preventative action.

"IBM Content Analytics allows us to quickly transform raw information into healthcare insights," said Dr. Carlton Moore, Associate Professor of Medicine at UNCHC. "It can reveal trends, patterns and deviations while predicting the probability of outcomes so that we can make decisions in minutes versus weeks or months."

Previously, UNCHC used IBM Content Analytics [4] to mine clinical data to improve the accuracy of its 2012 Physician Quality Reporting System (PQRS) measures, achieving double digit quality improvements in the areas of mammogram, cancer and pneumonia screening.

UNCHC is focusing the new IBM solution in three additional areas:

- Timely Follow-up of Abnormal Cancer Screening Results: Follow-up care for patients with abnormal tests is often delayed because the results are buried in electronic medical records. Using IBM Content Analytics, UNCHC can extract abnormal results from cancer screening reports such as mammograms and colonoscopies and store the results as structured data. The structured results are used to generate alerts immediately for physicians to proactively follow-up with patients that have abnormal cancer screening results.

- Reducing Costly 30-Day Readmissions: Preventable readmissions impact one in five U.S. patients, which adds unnecessary costs to the already strained health system[1]. As of last year, hospitals are also penalized for high readmission rates, with reductions in Medicare discharge payments. UNCHC is using the IBM solution to extract predictors of readmission risk from free-text clinical notes to find more effective ways to care for high-risk patients and provide safer patient care.
- Engaging More Patients: Getting patients involved in health care management is key to improving health outcomes, but clinical data in today's patient portals is often unfiltered and hard for patients to understand. UNCHC is using IBM Content Analytics to transform clinical data from electronic medical records into a simpler format so that patients can better understand their health information and participate in their care management plan.

Based on the success of these programs, UNCHC is planning to apply IBM Content Analytics to additional use cases such as helping patients with diabetes or patients with other chronic illnesses.

"IBM is creating a smarter, more connected healthcare system that empowers doctors and patients to make better choices," said Craig Rhinehart [5], Director of Enterprise Content Management Strategy at IBM. "We're pleased that our solutions can help UNC's healthcare providers deliver more holistic and individualized care to their patients."

Combining content management and analytics, big data solutions [6], cognitive capabilities and industry specific services, IBM enables Smarter Care [2] that uncover valuable insights into the social determinants, lifestyle choices and clinical factors that impact patient health, helping providers lower costs, enhance quality and improve outcomes.

[1] New England Journal of Medicine 2012

Source URL (retrieved on *04/16/2014 - 2:13am*):
http://www.mdtmag.com/news/2013/10/unc-health-care-uses-ibm-analytics-manage-medical-data-and-improve-patient-care

Links:
[1] http://www.unchealthcare.org/site
[2] http://www.ibm.com/smarterplanet/us/en/smarter_care/overview/
[3] https://www-03.ibm.com/innovation/us/watson/
[4] http://www-03.ibm.com/software/products/us/en/category/SWN40
[5] https://w3-connections.ibm.com/profiles/html/profileView.do?key=416807a7-bb12-4fd8-b346-4e1cc9352af2
[6] http://www-01.ibm.com/software/data/bigdata/