**INFORMATICS**

The field of informatics is a relatively new discipline that has been spurred by the rapid growth of health care technology. In its broadest sense, informatics attempts to improve the effectiveness and delivery of health care by using health information technology.

**ABOUT INFORMATICS**

- Informatics research initiatives cover several areas of broad focus, with the goal of extracting and making health data accessible to researchers and clinicians. One way to do that is studying data within electronic health records (EHR).

- Natural language processing (NLP) is a field of study that uses artificial intelligence to interpret and understand written language. It is especially useful to researchers who wish to use medical data contained within an EHR.

- Adverse event monitoring is an important part of patient care. Informatics tools can be used to monitor postsurgical adverse events and medication reconciliation to ensure patient well-being.

- Clinical decision support applications can help physicians deliver the best care to medically complex patients. These tools are especially useful for caring for patients who are aging and experience multiple chronic diseases.

**VA RESEARCH ON INFORMATICS: OVERVIEW**

- Health Services Research & Development (HSR&D) supports a comprehensive informatics research program, funding intramural research projects and maintaining two resource centers that promote access to clinical and administrative data for VA researchers.

- The VA Informatics and Computing Infrastructure (VINCI) is a research resource center aiming to improve access to VA data and to facilitate the analysis of those data in a secure environment, making it easier to create sophisticated analytics tools.

- VA Information Resource Center (ViReC) is tasked with advancing VA capacity to use data effectively for research and quality improvement, and to foster communication between research data users and the VA health care community.

- The Consortium for Health Care Informatics Research (CHIR) is a multisite collaborative research program that was instrumental in contributing to the development of HSR&D’s NLP research portfolio.

- Phenotype studies search for specific traits across populations of patients by using informatics tools like NLP. Optimal phenotyping is vital for large-scale research programs underway in VA, including the Million Veteran Program.

**SELECTED MILESTONES AND MAJOR EVENTS**

2008 – Funded VINCI, a high-performance analytic environment with secure access to corporate data warehouse and other VA data sources

2013 – Funded two Collaborative Research to Enhance and Advance Transformation and Excellence (CREATE) centers on informatics research to facilitate collaboration between investigators and VHA program offices

2015 – The Natural Language Processing State of Science conference was convened to showcase the achievements of VA’s NLP research in the last decade

2016 – The Central Role of Phenotyping in VA Research workshop began discussions on the role and importance of phenotyping for a broad range of research studies in the VA

2017 - Established partnership between VA and the Department of Energy to create the Big Data Science Initiative, which will use large data sets and high-performance computing to advance research in targeted areas of health care for Veterans

**RECENT STUDIES: SELECTED HIGHLIGHTS**

- Health providers receive an overwhelming number of electronic notifications via the EHR, making it difficult to focus on important patient information. Researchers at the VA Center...
Informatics research helps make health data available to researchers and clinicians.

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