



BIG DATA

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Interdisciplinary Data Sciences Consortium

* IDSC Seminar Series *

November 8, 2017 2:00pm-3:00pm

Location: ENB 313

Presents

Dr. He Zhang,

Dept. of Information Systems and Decision Sciences
Muma College of Business



Title: Detecting Side-effects via Electronic Medical Records with a case study in the Correlation of Parkinson's Disease with the use of Lipophilic Beta-Blockers

Abstract: Electronic Health Records (EHR) are a source of information regarding patients' medical history, diagnoses and medications. EHRs have been used in a variety of research methods including genetic analysis and medication development. However, EHRs are not being utilized in clinical research and in the medical field to their full extent. In this paper, we propose an increased use of EHR in clinical research and describe a simple heuristic to detect and confirm strong Adverse Drug Reactions (ADR) by employing EHR systems that might prompt further evaluation and serve as hypothesis generation for clinical trials. In the heuristic, we address the problem of incomplete and missing structured data in EHR systems and prove the effectiveness of the heuristic by finding a strong signal for an Adverse Drug Reaction linking the use of Lipophilic Beta Blockers to a subsequent diagnosis of Parkinson's disease.



Biography: Dr. He Zhang is an assistant professor in the Information Systems Decision Sciences Department, teaching a special topics course on healthcare management sciences. Dr. Zhang's research interests include healthcare data analytics and Operations research. Zhang has presented at numerous conferences, including meetings of INFORMS (Institute for Operations Research and the Management Sciences) and the 12th International Conference on Stochastic Programming. Dr. Zhang received his Ph.D. in Industrial Engineering and Management Sciences from Northwestern University prior to joining USF's faculty, and he has an MS degree in management Science and Engineering from Stanford University, as well as

additional engineering degrees from Tsinghua University.

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