May 20th, 12:30 PM

Text Mining From Drug Surveillance Report Narratives

Susmitha Wunnava
Worcester Polytechnic Institute

Tabassum Kakar
Worcester Polytechnic Institute

Xiao Qi
Worcester Polytechnic Institute

See next page for additional authors

Follow this and additional works at: https://escholarship.umassmed.edu/cts_retreat

Part of the Databases and Information Systems Commons, Investigative Techniques Commons, Library and Information Science Commons, and the Pharmacy Administration, Policy and Regulation Commons

Wunnava, Susmitha; Kakar, Tabassum; Qi, Xiao; and Rudensteiner, Elke A., "Text Mining From Drug Surveillance Report Narratives" (2016). UMass Center for Clinical and Translational Science Research Retreat. 94.
https://escholarship.umassmed.edu/cts_retreat/2016/posters/94

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Presenter Information
Susmitha Wunnava, Tabassum Kakar, Xiao Qi, and Elke A. Rudensteiner

Keywords
text mining, drug safety and effectiveness, adverse events

Creative Commons License
This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

This poster abstract is available at eScholarship@UMMS: https://escholarship.umassmed.edu/cts_retreat/2016/posters/94
Text Mining From Drug Surveillance Report Narratives

Susmitha Wunnava, MS¹, Tabassum Kakar, BS¹, Xiao Qin, MS¹, Prof. Elke A. Rundensteiner, PhD¹

¹Department of Computer Science, Worcester Polytechnic Institute

Analysis of postmarket drug surveillance reports is imperative to ensure drug safety and effectiveness. FAERS (FDA Adverse Event Reporting System) is a surveillance system that monitors Adverse Events (AEs) from drugs and biologic products. The AEs are reported through MedWatch voluntary reports (initiated from patients and healthcare providers) and mandatory reports (initiated from manufacturers). Much of the information in the voluntary AE reports is narratives or unstructured text. The increasing volume of individual reports, estimated at more than one million per year, poses a challenge for the staff to review large volume of narratives for drug clinical review. We are developing a computational approach using Natural Language Processing and UMLS MetaMap biomedical software to parse the narratives, recognize named-entities in the text and extract consumer/patient and related drug indications and adverse drug reaction information. The goal is to develop a text mining tool that automatically extracts relevant information from the report narratives which can be stored in pre-defined data fields in the FAERS database for efficient searching and querying during clinical review process.

Email: swunnava@wpi.edu
Phone: 508-259-1633