

An Intelligent Online System for Enhanced Recruitment of Patients for Clinical Research

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Introduction

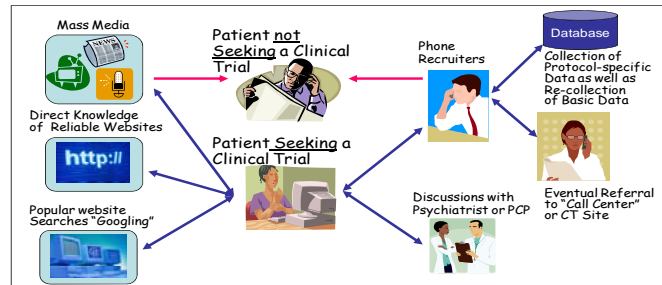
The recruitment and retention of subjects for clinical research has been identified as one of the bottlenecks in the development of new drugs and treatments by the healthcare industry. The Kansas City Area Life Sciences Institute has been instrumental in bringing together the Midwest Psychiatric Research Group and researchers from the School of Computing and Engineering at the University of Missouri-Kansas City to address this important problem. The resulting academic-corporate partnership has been funded by the National Institute of Mental Health at the National Institutes of Health.

Goals & Objectives

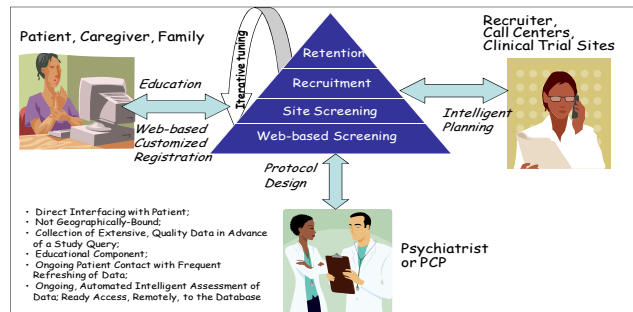
The project is based on developing and employing a novel internet-based system, called MindTrial, to enhance the voluntary enrollment of research subjects for studies conducted by Clinical Research Organizations.

- This will proactively engage patients and their caregivers who desire to be informed about clinical trials that might be relevant for their specific diagnoses, disease states and other characteristics.
- An important goal of the project is to facilitate accurate matches between the requirements of a clinical research study and the profile of research volunteers.
- To achieve this, state of the art knowledge representation and search techniques are being employed.
- Phase I of the project is focused on the development of a system for recruitment for clinical research trials on “Generalized Anxiety Disorder,” with eventual expansion to the inclusion of volunteers for studies on other mental health disorders.

MindTrial Recruitment Model



MindTrial Recruitment Model



MindTrial Search Engine



- Searching Features
 - General term based search
 - Semantic search – Medical Ontologies (MeSH, SNOMED)
 - Age range, gender
 - Location – city/state or zip
 - Inclusion/exclusion conditions to be selected depending upon a given clinical condition
- Multiple Presentation Views
 - Table view
 - Map view
 - Chart view

Clinical Study Views



MindTrial user interface helps recruiters find information about each study

Conclusions

A search interface for selecting potential volunteers based on an online questionnaire has been developed. As future work, matches shall be ranked by semantic and information theoretic considerations. Furthermore, the interface will be extended with summarized queries by employing an intelligent middle layer.

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