MedicalXpress

Informatics helps drive clinical and translational research

March 15 2013

According to researchers, clinical and translational science has emerged as a national priority and investigators are increasingly becoming reliant on the use of computer science (CS), information science (IS), biomedical informatics (BMI) and information technology (IT) tools and methods to support and enable high impact research.

However, the ability to use these types of tools and methods requires engagement and support from multidisciplinary teams, including individuals with technical backgrounds in the IT and informatics domains. Unfortunately, assembling such teams is extremely challenging in many large academic medical centers and the result is impediments to the advancement of potentially life-saving research.

In a study led by Dr. Philip Payne, chair of the Department of Biomedical Informatics at The Ohio State University College of Medicine, and published in the online journal *BMC Medical Informatics and Decision Making*, a group of investigators from several academic medical centers identified and examined critical issues surrounding organizational dynamics and leadership structures that influence the effective use of IT and informatics expertise to advance clinical and translational research.

A total of 31 academic medical center domain experts from across BMI, CS, IS and IT disciplines completed structured surveys and further thematic analysis of public-domain documentation was also conducted. The researchers then identified critical factors that served to influence

and/or affect access to IT and informatics expertise and tools.

"We concluded that the presence of a formal, academic BMI unit is important to ensure IT and informatics are optimally used to support clinical and translational research. Furthermore, we found it is also equally important to recognize the differences and synergies between IT and informatics leaders and to ensure that informatics leadership is properly empowered to advance the clinical and translational research agenda," says Payne, who also serves as a leader of the Biomedical Informatics Program within Ohio State's Center for Clinical and Translational Science and also principal investigator of the study.

"End user access to resources and technologies is greatly enhanced when these criteria are adequately addressed," Payne adds.

Researchers involved in the study identified a number of important people, organizational and leadership issues that may impede access to IT and informatics tools and expertise in support of clinical and translational research. These issues included: the engagement and coordination of appropriately trained leaders; a frequent fragmentation of IT and informatics personnel and infrastructure across organizational units; and the provision of institutional resources and financial support sufficient to sustain clinical and translational science-focused IT and informatics personnel and infrastructure.

"Overall, our findings help decision makers to better understand how to organize and staff both IT and informatics capabilities so that the maximum benefits of clinical and translational science are realized, namely the rapid translation of discoveries from the lab into treatment that directly benefit patients," Payne says.

More information: www.biomedcentral.com/1472-6947/13/20

Provided by Ohio State University Medical Center