Using Social Network Analysis Tools to Visualize and Analyze Collaboration in Use of CTSA Resources and Publications

**Anantha Shekhar, MD, PhD, PI, Indiana Clinical and Translational Sciences Institute;
Julie McGowan, PhD, Director, Tracking and Evaluation Program
Joe Hunt, MPH, Associate Director, Tracking and Evaluation Program**

Indiana University School of Medicine

Indiana University – Purdue University Indianapolis

Abstract

To garner baseline data to determine whether or not the Indiana Clinical and Translational Sciences Institute (Indiana CTSI) was achieving collaboration across disciplines and institutions, the Indiana CTIS Tracking and Evaluation (T&E) Program compiled data regarding the utilization of resources across different Indiana CTSI programs and Project Development Teams (PDT) and data for the authors, departments, and institutional affiliations of Indiana CTSI peer reviewed publications. The Indiana CTSI T&E used a social networking tool, NodeXL, and data garnered to create a visualization of utilization of resources and publications co-authorship. The analysis showed the mean number of contacts with different resources per investigator was 1.37; every targeted program and PDT was shown to be linked to another. For publications analysis, 64 papers were identified with a total of 195 authors from the four Indiana CTSI member institutions. Sixty-nine of the authors were ICTSI investigators. However, 126 authors were non Indiana CTSI investigators although residing at partner institutions. Most surprising was that 140 authors were from 58 non-Indiana CTSI institutions. **Conclusion:** Baseline data indicates interdisciplinary and inter-institutional collaboration is already taking place.