

STrak/MANCS: SUPPORTING EFFECTIVE DATA ACQUISITION FOR THE NATIONAL CHILDREN'S STUDY

University of Michigan Survey Research Center and the MANCS Executive Committee

High-quality data collection for the National Children's Study (NCS) requires an informatics platform able to effectively integrate requirements of both survey and clinical research. STrak/MANCS, the informatics platform developed by the Michigan Alliance for National Children's Study (MANCS) for its work on the NCS, is a customized version of the sample management system developed at the Survey Research Center (SRC) at the University of Michigan (UM). The customized integrated suite of software applications together provide a fully functioning system for field and clinical research recruitment, data collection/ transmission/ storage, sample management and tracking, with automated, real time reporting for staffing assignments, monitoring of work flow, and quality control. The FISMA ATO for this system's use in the NCS was obtained in February 2011. Key strengths of STrak/MANCS include disconnected/offline data collection with secure daily upload to secure servers, with automatic database integration; fully integrated system of modules, providing high quality control and efficiency across all MANCS tasks including recruitment, scheduling, interviewing, specimen collection, and real time paradata monitoring of all functions for project management purposes; design of systems specifically for scientific survey purposes, thus not requiring translation for research use, and maximizing training benefits (which includes various decision trees, reminders, and pop-up instruments designed to reduce the possibility of error and maximize efficiency of data collection); and a fully integrated system developed at marginal cost. The significance of the *integration* of all the above functions is paramount. Although there are software solutions for many of the individual tasks above, the integration of them across multiple platforms presents a major challenge. SRC's sample management system was designed intentionally to support such integration in a flexible way that could be customized for a range of research applications. The value of this model for MANCS has been evident even after only a brief time in the field. Because the system is readily customizable, adaptation of the system to the eventual Main Study recruitment model and protocol, whatever they will be, can be implemented straightforwardly. The goal of the STrak/MANCS integrated system is to fully support the NCS mission in Wayne County, and its use in the other identified Michigan counties (Grand Traverse, Lenawee, Genesee, and Macomb).