

CLINICAL & TRANSLATIONAL RESEARCH INFORMATICS CENTER (CTRIC)

CIBR: Center for Innovative Biomedical Resources

CORE SERVICES

Research Design: CTRIC staff is trained to make recommendations on appropriate study design, selection of suitable measures and variables, and data analytic strategies. CTRIC can also give assistance with power and sample size calculations.

Data Management: CTRIC maintains each project's relational database throughout the study including an IRB approved audit log of any data changes. Data can be prepared in tables in a readable format upon request, either at intervals during the study or at the end. Data reports, detailing enrollment, missing values, or other specifications can be created as needed.

Access to data in the University of Maryland Medical System (UMMS) Clinical Data Repository: Across various facilities, UMMS has more than 600,000 visits every year, with much of the resulting data stored in the data repository. Researchers who are interested in accessing this vast resource can be provided with guidance through the process of obtaining IRB approval, submitting a data request, and analytic strategies.

Quality Assurance/Control: CTRIC staff can design a quality assurance plan specific to a researcher's study database and run regular reports to indicate improbable and impossible values in the database.

Data Analysis: CTRIC staff is available to provide a wide range of data analysis services, from *t*-tests and analysis of variance with repeated measures to complex regression analysis. CTRIC provides annotated documentation of the analysis results, ensuring clear understanding of both the statistical tests used and proper interpretation of the results; CTRIC can also prepare graphs and tables, as well as draft appropriate portions of the Results section for a manuscript or scientific poster.

MISSION

The purpose is to accelerate the translation of scientific discoveries from the basic science bench to clinical studies, bedside practice, and community intervention, through use of information technologies (IT) and informatics. CTRIC enables and advances research through various services which support clinical and translational research. CTRIC offers a variety of services to assist University of Maryland Baltimore faculty with their research needs at any stage in the process.

ABOUT CTRIC

CTRIC is a service center within the Department of Epidemiology and Public Health (EPH) in the University of Maryland's School of Medicine (UMSOM).

CTRIC supports clinical and translational researchers at all stages of project development. These services include: data capture; data management; custom database creation and data storage; enabling access to data in the University of Maryland Medical Center Clinical Data Repository; quality assurance/control; data analysis; and research design.

COMMON TOOLS USED BY CTRIC

- TeleForm®
- REDCap®
- Microsoft Access®
- MySQL®
- FreezerPro®
- Manual keying of data is also an option

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CORE INSTRUMENTATION

Data Capture

CTRIC employs both web-based and scannable paper-based form technologies which minimize manual data entry in order to increase the speed and accuracy of collected data entered in the database.



Database Creation and Data Storage

CTRIC can organize study data from across various location and software packages into a cohesive, easy to use database, allowing the researcher to have ready access to any collected data. CTRIC can construct databases in a variety of different formats (PostgreSQL, MySQL, Microsoft Access, etc.) based on the needs of the researcher. Databases can be created to accept ongoing data entry or for extraction of datasets from pre-existing databases. CTRIC offers secure, HIPAA compliant data storage.



Recent Publications

Brotman, RM, Shardell, MD, Gajer, P, Tracy, JK, Zenilman, JM, Ravel, J, Gravitt, PE. (2014). Interplay between the temporal dynamics of the vaginal microbiota and human papillomavirus detection. *Journal of Infectious Disease*, 210(11) 1723-1733. 22108636

Cross, RK, Jambaulikar, G, Langenberg, P, Tracy, JK, Collins, JF, Katz, J, Requeiro, M, Schwartz, DA, Quinn, CC (2015). TELEmedicine for Patients with Inflammatory Bowel Disease (TELE-IBD): Design and implementation of randomized clinical trial. *Contemp Clin Trials*. Epub <http://dx.doi.org/10.1016/j.cct.2015.03.006>

Nan, X, Madden, K, Richards, A, Holt, C, Wang, MQ, Tracy, JK (2015). Message framing, perceived susceptibility, and intentions to vaccinate children against HPV among African American parents. *Health Communications*, e-pub 8 December.

Tracy, JK, Boushey, CJ, Roberts, SM, MK, Morris, JG, Grattan, LM (2016). Communities Advancing the Studies of Tribal Nations Across the Lifespan (CoASTAL) cohort: Design, Methods, and Implementation. *Harmful Algae*, 57(B), 9-19.

Lane, W, Sacco, P, Downton, K, Ludeman, E, LF, McArdle, PF, Tracy, JK. (2016). Gambling and child maltreatment: A systematic review. *Child Abuse and Neglect*, 58, 24-38

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