

# 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.

**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; quality assurance/control; data analysis; and research design.

### COMMON TOOLS USED BY CTRIC

- REDCap®
- Microsoft Access®
- SQL Server®
- Manual keying of data is also an option

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### CORE INSTRUMENTATION

#### Data Capture

CTRIC employs a secure, web-based application for data capture which allows for real time data entry and validation, and audit trails. In addition, CRF's can be printed in order to allow for offline data collection. Any data collected on paper in offline mode will require manual entry with double keying to ensure data accuracy.

#### Database Creation and Data Storage

CTRIC can organize study data from across various locations 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 (SQL server, 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

TYVAC Study Team. Safety and immunogenicity of a typhoid conjugate vaccine among children aged 9 months through 12 years in Malawi: results from a randomised, double-blind, controlled trial. (2022). *The Lancet Global Health*.

Lagos, RM, Ferreccio, C, Hormazábal, JC, Sikorski, M, Duarte, S, Higginson, E, Tennant, SM, Pasetti, M, Sztein, MB, Nkeze, J, Kasumba, IN, Blackwelder, WC, Cook, P, Fernandez, A, Dougan, G, Simon, R, and Lees, A, Tracy, JK, Daza, P, Mena, P, Yarmuch, J, Valenzuela, D, Thonet, G, Palacios, LG, Aguayo, G, Viñuela, E, and Levine, MM., Multisite Study of the Prevalence of *Salmonella* Typhi Carriers Among 2,307 Persons of Two Different Age Groups ( $\geq 55$  and 18-34 Years) Undergoing Cholecystectomy in Santiago, Chile, 2017-2019. *The Lancet*. Available at SSRN: <https://ssrn.com/abstract=4051455> or <http://dx.doi.org/10.2139/ssrn.4051455>

Amin, N. B., Bridgham, K. M., Brown, J. P., Moyer, K. F., Taylor, R. J., Wolf, J. S., Witek, M. E., Molitoris, J. K., Mehra, R., Cullen, K. J., Papadimitriou, J. C., Raghavan, P., Hatten, K. M. (2023). Regionalization of Head and Neck Oncology Tumor Boards: Perspectives of Collaborating Physicians. *OTO Open*, 7: e18

#### CONTACT



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