Job Description

Job Title: Database Administrator
Department: School of Optometry and Vision Science
Reports To: CORE Data Team Leader
Jobs Reporting: None
Salary Grade: 8
Effective Date: January 2018

Primary Purpose
This position is responsible for maintaining the integrity and security of all Centre for Ocular Research & Education (CORE) study data as well as preparing it for analysis according to Good Clinical Practice requirements and the needs of each study. This position is contingent upon funding.

Key Accountabilities

Development and Support of Multiple Databases
- Design, develop and test database schema using RDBMS (Relational Database Management System) tailored to specific study data collection needs based on study case report forms for data entry or data transcription.
- Create and maintain documentation of database design, validation, changes, lock and data query for each study database.
- Develop/modify customized codes/scripts to perform edit checks.
- Assess, troubleshoot, and resolve problems related to the data collection applications.
- Assist with the entry and checking of study data as required.
- Create randomization schemes for research studies based on provided requirements.

Administration and Maintenance of Database Systems
- Set up and maintain logins for the users of databases.
- Monitor and implement security procedures to limit and ensure the appropriate access to the databases systems.
- Implement database upgrades when needs arise.
- Coordinate, monitor and oversee the backing up and archiving of study image data.

Development and Maintenance of Datasets
- Implement and perform data queries.
- Create, organize, store, document, extract/export, convert, merge, and manipulate data files.
- Tailor data files for statistical analysis (Statistica, SPSS, SAS or others as required).
- Apply knowledge to the process of data cleaning and resolving data problems.

Support of CORE Research
- As required, work with UW IT support and external IT consultants for maintenance and troubleshooting of equipment, seeking guidance, where appropriate, from study investigators and CORE Senior Administrative Team.
- Consult with CORE staff, investigators and graduate students regarding data management needs.
- Perform modifications, such as addition and debugging of features, on Star Tracker custom software.
- Provide testing and/or support for system development activities when needs arise.
- Provide administrative support to Data Team as required.
## Communication
- Respond to queries from study investigators and data analysts, with guidance where appropriate.
- Respond to requests from data management personnel and/or study investigators for database changes.
- Communicate with internal and external data users for sending data or image files.
- Provide database specific training to data entry personnel.

## Required Qualifications

### Education
- Degree in Computer Science or related field.
- Training on the management of data sets using RDBMS.

### Experience
- In-depth working experience with designing, developing, administrating and troubleshooting databases and their applications using REDCap, MS Access or other equivalent RDBMS.
- Experience querying and manipulating data sets.
- At least 2 years’ development experience using PHP, JavaScript, jQuery, Codeigniter and/or Linux Cent-OS 7 would be an asset.
- Good oral and written communication skills with demonstrated decision-making, organizational and time management skills.
- Knowledge of Good Clinical Practice guidelines is an asset.

### Knowledge/Skills/Abilities
- Extensive knowledge of Relational Database Management Systems (RDBMS), including MS Access.
- Familiarity with PHP, JavaScript, HTML, MySQL, MS Excel, SPSS and SAS.
- Working Knowledge of IT infrastructure, network servers, and the configurations of databases and software applications.
- Knowledge of REDCap database would be an asset.

## Nature and Scope

### Contacts
- Internally this position must obtain, clarify and discuss information with CORE research staff and other members of the data management team in order to determine the data needs of each study. The incumbent is required to supply data and related information to CORE sponsors. She/he also works with UW IT personnel to maintain the required infrastructure and database applications and troubleshoot any problems that arise.

### Level of Responsibility
- This position is responsible and accountable for organizing, storing, documenting, extracting/exporting, converting, merging and manipulating CORE data, from the point that it is collected to the point when it is archived.

### Decision-Making Authority
- This position is required to troubleshoot problems with database applications as well as any others related to the integrity of CORE data. Guidance will be provided by the UW IT department.

### Physical and Sensory Demands
- The incumbent experiences physical and sensory demands typical of a position whose main focus involves attention to detail and computer use. It requires extension sitting, repetitive hand/finger movements and concentrated visual tasks. Frequent breaks are encouraged.

### Working Environment
- There is minimal exposure to disagreeable conditions typical of an administrative position required to occupy a cubical in an office shared with three or four other individuals.