

RC3 - Biostatistics Core Services

The faculty and staff in the Biostatistics Core will address the following three aims:

Aim 1. Provide biostatistical support in study design, proposal development, data management, statistical analysis, and research dissemination for the OAIC pilot, exploratory, and research development studies as well as extramurally funded projects.

Aim 2. Train junior faculty and OAIC Junior Scholars on research design, study implementation and management, statistical methodology and analyses, and data management.

Aim 3. Develop new methodology for the design and analysis of OAIC studies.

The Biostatistics Core works closely with the Executive Committee, the Leadership and Administrative Core (LAC), the Independent Review Panel, the Pilot and Exploratory Studies Core (PESC), the Research Education Core (REC), the Clinical Research Core (RC1), the Metabolism and Translational Science Core (RC2), and the Data Science and Applied Technology Core (RC4). The above aims will be achieved through the following tasks:

1. Create operational definitions for outcome variables and other covariates to be measured.
2. Analyze pilot/exploratory studies to obtain data useful for planning future studies.
3. Provide pre-study and pre-proposal study design guidance: perform power analyses, calculate appropriate sample size for testing intervention effects, and develop statistical analysis plan.
4. Generate randomization schemes.
5. Monitor the recruitment, adherence, and retention of subjects for OAIC studies.
6. Develop procedures and forms for data collection.
7. Design the data management system to include web-based applications, prepare and install software at data collection sites, and train site staff in its use.
8. Design and implement quality control procedures for data collection and processing.
9. Perform appropriate statistical analysis.
10. Develop new biostatistical methodology for the design and analysis of OAIC studies as needed.
11. Collaborate with the Research Education Core (REC) to provide training to junior faculty and OAIC Junior Scholars regarding the conduct and statistical analysis of research with older adults.
12. Monitor and measure protocol deviations and assess the potential impact of any deviations on the OAIC studies.
13. Help OAIC researchers with grant proposals and manuscript writing.