

Statistician/Research Associate – Full-time Position

Applications are invited for a rich opportunity in a medical research setting located in Edmonton, Alberta. The Kidney Health Research Group is a non-profit research organization housed in the Department of Medicine at the University of Alberta, Edmonton, Canada. The Kidney Health Research Group performs cutting edge research that improves the care and quality of life for people living with kidney disease and risk factors associated with kidney disease. The Kidney Health Research Group serves as a consulting body to many internal and external investigators. These investigators are medical, public health, epidemiological and health economic experts. As such, the Kidney Health Research Group hires experts in mathematical statistics in order to complement the expertise of the investigators. Together these collaborative endeavors produce peer-reviewed publications from their clinical research which lays the foundation underpinning clinical practice guidelines and evidence-based policy making.

The research group is directed by Drs. Scott W. Klarenbach and Marcello Tonelli. The successful candidate will be working with an experienced team of Statisticians accredited with the Statistical Society of Canada.

Position Summary:

This position provides statistical consulting to clinical investigators using administrative data, meta-analysis, cohort studies and randomized trials. The administrative data holdings include >99% of registered Albertans and combines provider claims, hospitalizations, ambulatory data, medication prescriptions and laboratory data. This position performs data management, quality assurance and implements all statistical aspects, design and analysis, of the clinical research studies. Clinical research manuscripts are co-written between the statistical expert and the investigator. The statistical skills and expertise required for this position are unique and complement the expertise of the investigators. This position must demonstrate practical statistical knowledge, experience and expertise, and present evidence of applying good statistical theory and methods to practical and to communicate results.

Primary Responsibilities:

1. Researches high-level complex statistical aspects of the design, and modelling and non-modelling techniques
 - Determines the appropriate statistical techniques/methodology to use based on literature searches and reviews
2. Develops advanced statistical elements of grant proposals and contracts. Develops data collection protocols and research standards
 - Drafts and/or critically revises appropriate proposal sections; sample size calculation, statistical methods, study design
3. Data management
 - Collaborates on the specifications of the design of the databases and the data elements
 - Merges and cleans datasets, provides input into additional data requirements and restrictions
4. Study design
 - Implements the statistical components and collaborates in the methodological components in the design of studies: randomized trials (parallel or cross-over, factorial, cluster), cohort studies, nested cohort studies, case-control, survey sampling (cross-sectional, longitudinal), etc
5. Statistical analyses
 - Designs and implements statistical procedures: generalized linear models (logistic, linear, Poisson, negative Binomial, binomial, etc), mixed models (random effects, Generalized Estimating Equations), meta-analysis (weighted least squares, maximum likelihood,

- restricted maximum likelihood, meta-regression, network analysis, indirect comparisons), longitudinal analysis (repeated measures, mixed models, etc), variance imputation (i.e., single and multiple imputation), spline regression, time-to-event (non-parametric (Kaplan Meier), semi-parametric (Cox regression), parametric (log-logistic, log-normal, Weibull), non-modelling techniques, factor analysis (principle components, k-nearest neighbours, multinomial regression, etc), etc
6. Consultations
 7. Collaborates with on- and off-site subject-specialists and methodologists. Manuscripts, reports, presentations and grant proposals
 - Primarily drafts and/or critically revises methodology and results sections for publications/presentations/grant proposal, prepares tables and graphs, critically reviews conclusions and other elements of the document with a high degree of autonomy and independence
 - Summarizes, analyzes and organizes data for publication. Participates in the writing of research papers, the preparation of presentations and/or other publications
 - Assists in the preparation of research grant applications and contract proposals

Qualifications:

- MMath/MSc or PhD in Statistics. Potential for professional accreditation with the Statistical Society of Canada.
- Candidates with courses in Generalized Linear Models, Survival Analysis, Clinical Trials, Sampling, and Meta-Analysis. Courses in Machine Learning, Decision Analysis and Computer Programming would be an asset.
- Excellent computing skills with software packages such as Stata, R and/or SAS.
- Effective English communication of statistical ideas both oral and written with health researchers.
- Demonstrated commitment to accuracy and attention to detail.
- Proficiency in a Windows environment using MS Office applications.
- Ability to work well independently and as part of a team.
- Strong communication, organizational, time management, interpersonal, and problem-solving skills.

This grant funded opportunity will start as soon as an appropriate candidate is selected. The starting salary ranges from \$65,000 to \$80,050 and will be commensurate with experience and education. This is a unionized position with the Association of Academic Staff, University of Alberta (AASUA) with excellent benefits. This position is full-time and in-person with a starting term length of 3 years. Partial remote work may be negotiated after the first year.

Individuals interested in this excellent opportunity should submit a letter of interest, curriculum vitae and the names and contact information of three references as soon as possible to:

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