



THE UNIVERSITY OF BRITISH COLUMBIA

Postdoctoral Research Fellow – Research Scientist, Economic Modelling

Job summary

The School of Population and Public Health and Health Economics Program at the Centre for Clinical Epidemiology & Evaluation (C2E2) is seeking a full-time Postdoctoral Research Fellow, for a 15-month term, with an initial appointment of one year, to take a significant role within a genomic matching study for kidney transplantation (CanPREVENT AMR project). A detailed protocol has been developed for a discrete event simulation model within this project, and the main role of the incumbent will be to develop, refine, code, test, and validate the baseline simulation model, as well as to implement and analyze various proposed policy changes.

The position is available to a PhD-trained individual who is competent working in a variety of roles, from policy scenario development, coding a discrete event simulation model, developing economic models through to conducting a costing analysis and budget impact analysis. We are looking for someone with a keen interest in advanced statistical analysis, simulation modelling and health economics, preferably in the context of health and healthcare issues. The successful candidate will need to demonstrate a relevant background and ability to code and analyze data from a simulation model based on an existing protocol. The working environment will require both independent research and working as a core member of the project team, with opportunities to engage with researchers, healthcare professionals and policy makers.

Organizational status

The Postdoctoral Research Fellow works independently and primarily reports to Dr. Stirling Bryan, with additional reporting on technical aspects to Dr. Steven Shechter, and to the Research Program Manager on project management aspects. The incumbent will interact and work with other faculty, research staff and graduate students within the Centre for Clinical Epidemiology and Evaluation, and external collaborators and policy makers.

The Centre for Clinical Epidemiology & Evaluation (C2E2) undertakes research and training and provides evidence-based advice to advance a sustainable health system for British Columbians. C2E2 scientists and many of its staff, including this position, are part of the School of Population and Public Health (SPPH), which is in the Faculty of Medicine at the University of British Columbia.

SPPH is an innovative unit that encompasses many of the health-related groupings at UBC as a collaborative venture. The School is structured around four divisions: Occupational and

Environmental Health; Health Services and Policy; Epidemiology, Biostatistics and Public Health Practice; and Health in Populations. The resulting mix of professions and disciplines is seen as a means of connecting individuals and learners to galvanize the relationship between health research, public health and health services and to enhance learning.

Work performed

- Develop, refine, code, test, and validate the baseline simulation model, as well as to implement and analyze various proposed policy changes.
- Perform research and analysis including applied health economics research, including, but not limited to cost-effectiveness analyses, cost-utility analyses and budget impact analysis from inception to delivery for internal/external clients.
- Provide transparent model documentation and user-friendly interfaces.
- Ensure the quality of model programming and the robustness of model assumptions.
- Work with a senior health economist to develop and modify economic models.
- Perform statistical analysis of primary outcomes data.
- Work with other team members on reports, including systematic reviewers, qualitative researchers, scientific writers, other health economists, and research program manager.
- Accountable for providing expertise in health economics, financial/funding modelling/applications expertise and consultative advice in support of health system funding decision-making, planning, funding allocation, priorities and processes.
- Support publication and dissemination of research findings in peer reviewed journals and national/international conferences by preparing manuscripts, posters and other publications, and participating in presentations.

Qualifications

The successful candidate should be able to demonstrate evidence of:

- A doctorate degree in a relevant discipline, e.g., health economics, pharmacoeconomics, health outcomes, health policy, operations research, applied statistics, applied mathematics, applied econometrics, or other relevant fields (preferred emphasis on health research).
- Familiarity with health and healthcare issues preferred; knowledge and understanding of health technology assessment projects and its components (systematic reviews, health economics, research methods, policy analysis); good understanding of health economic and statistical concepts.
- Experience developing health economic and outcome research models, such as cost-effectiveness and budget impact models; experience with simulation methods (Markov-models, Monte Carlo, bootstrapping, etc.); experience in advanced statistical analysis (parametric survival analysis) and software (e.g., SAS, Stata, Python, R, Advanced Excel/ Visual Basic).
- Strong coding skills, with coding experience in a general purpose-programming language (e.g., C/C++, Java) a big plus.
- A strong publication record and excellent technical communication and interpersonal skills; detail-oriented as well as high-level conceptual, analytical, and critical appraisal skills.
- Able to work independently, and analyze/solve methodological and technical problems that arise during the course of the research; be comfortable with change, and be adaptable as the project evolves; able to thrive in a collaborative team environment and work effectively with research personnel, clinicians, and patients.

- Personal motivation and self-management; able to take responsibility for meeting deadlines within timelines; must exhibit a high level of professionalism, judgement, ability to maintain accuracy and attention to detail.

Contact

Apply by email to Louisa Edwards (louisa.edwards@ubc.ca), sending a curriculum vitae with all relevant employment and academic experience; a cover letter, noting research experience, interest in the position, and demonstrating suitability for the role; and names of three references. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

Due to the number of resumes we receive, we are unable to confirm receipt of submissions over the phone, or provide the status of competitions except to those who are selected for an interview.

Posting expiry

Open until filled. Desired start date is December 1, 2020.