



Post-doctoral Fellow

Cardiovascular Disease Policy Model Research Group

The Cardiovascular Disease (CVD) Policy Model research group, located in the Department of Epidemiology and Biostatistics at UCSF, is seeking a highly motivated scholar to join our multidisciplinary team for a 2-3-year Postdoctoral Fellowship. The Fellow will collaborate closely with Drs. Kirsten Bibbins-Domingo and Dhruv Kazi to develop and disseminate original research that supports the group's research agenda and enhances the capabilities of the CVD Policy Model.

The CVD Policy Model is a validated state-transition (Markov) computer simulation of cardiovascular disease among adults in the United States. The Model has been used for over 30 years to represent population-level trends in CVD risk factors, outcomes, and healthcare costs and to evaluate the impact and cost effectiveness of CVD prevention and treatment strategies ranging from public health interventions (e.g., reductions in dietary salt, soda taxation) to clinically targeted approaches (e.g., cholesterol treatment guidelines; emerging therapeutics). Though originally designed to be nationally representative of the US population, we have adapted the model to examine subpopulations such as Veteran's Affairs population and non-Hispanic blacks. The Model has also been adapted for other countries including Mexico, China, Argentina, and Canada. This work has resulted in several high impact publications in the New England Journal of Medicine, JAMA, Annals of Internal Medicine, Circulation, and Health Affairs.

In an effort to capture important emerging trends in cardiovascular disease and, more generally, chronic diseases, we are embarking on a substantial upgrade to the CVD Policy model. The Model will expand to include children and young adults (among whom risk factors such as obesity and diabetes have worsened) and to better capture disease progression, outcomes, and costs relating to diabetes, chronic kidney disease, heart failure, atrial fibrillation, and multiple morbidity. Much of our team's work focuses on trends in and interventions targeting traditional cardiovascular risk factors including hypertension, lipids, smoking, and diabetes as well as biomarkers including C-reactive protein and coronary artery calcification. We have a strong emphasis on simulating interventions for cost-effectiveness analyses and we are developing new approaches to estimating healthcare costs and quality of life measures to enhance this area.

We are seeking a post-doctoral fellow to further develop our research program in one or more of these areas. Fellows will have the opportunity both to develop projects that employ computer simulation modeling and to carry out analyses using one or more of the national surveys, observational studies, and/or healthcare datasets that serve as primary sources for our model inputs (e.g., NHANES, National Inpatient Sample, National Health Interview Survey). The overarching

training goal is to develop skills related to the use of simulation models to address clinical or policy-relevant questions, manuscript creation, and publication in high-impact journals.

Successful candidates will have a PhD in Epidemiology, Health Economics, Applied Mathematics, or a related field and will have experience with quantitative data analysis as well as strong writing skills, in particular writing for academic audiences. If interested, send a 2-page letter describing your research experience and career objectives along with a curriculum vitae, two samples of academic writing, and three references to Dr. Kirsten Bibbins-Domingo (kirsten.bibbins-domingo@ucsf.edu). While fellows must have received their doctoral degree prior to starting the post-doctoral position, the start date of the fellowship is flexible. If you would like further information you can contact Joanne Penko, the CVD Policy Model project manager, at joanne.penko@ucsf.edu.