

MASSACHUSETTS GENERAL HOSPITAL

Job Title: Research Staff Scientist

Department/ Unit/ Section: Medical Practice Evaluation Center, Department of Medicine

Reports To: Kenneth A. Freedberg, MD, MSc
Rochelle P. Walensky, MD, MPH
Andrea L. Ciaranello, MD, MPH

GENERAL SUMMARY/ OVERVIEW STATEMENT:

The Medical Practice Evaluation Center (MPEC) has an opportunity for an enthusiastic and energetic individual to join our research team investigating the clinical and economic value of alternative strategies of HIV treatment and prevention, as well as modeling other diseases. The position is with an internationally-recognized, multidisciplinary team from Massachusetts General Hospital, Harvard Medical School, Harvard T.H. Chan School of Public Health, Yale School of Medicine, Brigham and Women's Hospital, and multiple international institutions. Together, the group studies the clinical impact and cost-effectiveness of various prevention and treatment options for HIV/AIDS, tuberculosis, diabetes, cardiovascular, and other diseases, in collaboration with researchers in the US, as well as in a range of international settings, including Botswana, Brazil, Côte d'Ivoire, France, India, Mozambique, South Africa, Thailand, and Zimbabwe.

The candidate should be highly motivated with extensive experience in quantitative methods, independent mathematical model development, parameterization, and debugging. The position offers a stimulating and multidisciplinary environment and the opportunity to contribute to the development of the NIH-funded Cost-effectiveness of Preventing AIDS Complications (CEPAC) microsimulation model, and potentially other disease models. The primary responsibilities of this individual will be to assist with model refinement and extension, to conduct CEPAC model-based cost-effectiveness analyses, to lead in abstract presentation and manuscript preparation, to present research findings, and to assist with grant submissions. There are multiple possibilities for interaction with other researchers in Boston, as well as collaboration with many national and international research groups and institutions.

Interested candidates should apply via www.massgeneral.org/careers.

****When applying, please include a cover letter along with your resume.****

For more information regarding our group, please visit <http://www.massgeneral.org/mpec/>.

PRINCIPAL DUTIES AND RESPONSIBILITIES:

Responsibilities include, but are not limited to, the following activities:

- Lead US and international projects to complete the aims of numerous NIH grants, including development and specification of mathematical simulation models
- Conduct multiple clinical and cost-effectiveness analyses on different aspects of HIV disease management using a computer simulation model of HIV disease (the CEPAC-US, CEPAC-International, and CEPAC-Pediatric models), assuring consistency with guidelines for best practices
- Develop and apply new methodologies in stochastic computer simulation to achieve research aims

- Perform literature reviews and synthesize relevant data for these projects with biostatistics staff; work with these staff to convert published data into usable and appropriate input parameters
- Assist with the parameterization and documentation of the model, train other users on updates
- Develop novel simulation models to address policy questions related to HIV and potentially other clinical conditions
- Develop analysis plans and protocols for studies consistent with federal guidelines
- Troubleshoot model inconsistencies (bugs) alongside the programmer and other research staff (Research Assistants and Project Managers)
- Provide guidance to Research Assistants, particularly regarding methodological issues
- Provide input into major studies undertaken by the research team
- Lead abstract and manuscript preparation, as well as presentation of study results for several projects at a time
- Prepare grant applications and related documents
- Attend national and international scientific meetings
- Present research at seminars, working group meetings, and lectures
- Take a major role in technology transfer and training meetings with US and international investigators
- Coordinate design of specific studies, collaborating with US and international collaborators across multiple sites
- Assist in the training of new employees in the use of the CEPAC model
- Other duties as assigned

QUALIFICATIONS:

Job qualifications include the following:

- PhD or ScD in Operations Research, Decision Science, Systems Engineering, Industrial Engineering, or related area
- Minimum of 7 years of research experience (inclusive of graduate studies)

SKILLS/ ABILITIES/ COMPETENCIES REQUIRED:

- Capacity to manipulate large amounts of data and outstanding judgment with regards to study design and protocols
- Ability to work with mathematical models, including Markov and Monte Carlo simulation models, compartmental and agent-based epidemiological models, as well as deterministic and probabilistic sensitivity analysis, and ability to solve technical problems in these areas
- Superior writing, presentation, and organizational skills for manuscript and abstract preparations, as well as completion of grants and contracts in a timely fashion
- Facility with SAS data analysis software, Access databases software, and R, Python, or other statistical software
- Proficiency with standard office software (Microsoft Word, Excel, and PowerPoint as well as Internet applications) and the ability to learn new computer applications
- Ability to work independently as well as part of a team
- Intellectual independence and initiative
- Ability to supervise research assistants and others on the team in collaborative projects
- Experience in public health, health economics, and health policy, preferably in HIV/AIDS and/or TB
- Ability to work within NIH and other federal and foundation regulations and guidelines
- Previous international healthcare research experience preferred
- Experience in developing mathematical optimization models for location-optimization and resource allocation a plus

This description has been designed to indicate the general nature and level of work performed by an employee within this position. The actual duties, responsibilities and qualifications may vary based on need.

WORKING CONDITIONS:

Duties will be carried out in a typical office environment. Occasional evening or weekend work may be required.

SUPERVISORY RESPONSIBILITY:

Supervisory responsibilities include overseeing the analytic work conducted by fellows, graduate students, post-docs, and other researchers on assigned projects within the MPEC as needed.

The above is intended to describe the general contents and requirements of work being performed by people assigned to this classification. It is not intended to be construed as an exhaustive statement of all duties, responsibilities or skills of personnel so classified.