

## MASSACHUSETTS GENERAL HOSPITAL

Job Title: Research Specialist

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 experience in quantitative methods and public health research. Ideally, the candidate will have experience in mathematical model development, parameterization, and debugging. The position offers a stimulating, collaborative, and multidisciplinary environment and the opportunity to contribute to the development of the NIH-funded Cost-effectiveness of Preventing AID Complications (CEPAC) microsimulation model, and potentially other disease models. The primary responsibilities of this individual will be to help design and conduct model-based cost-effectiveness analyses, lead in abstract presentation and manuscript preparation, assist with model refinement and expansion, and contribute to new proposals and grant preparation. There are multiple possibilities for collaboration with other researchers in Boston, as well as with many national and international research groups and institutions.

Interested candidates should apply via [www.massgeneral.org/careers](http://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:

- Conduct clinical and cost-effectiveness analyses on different aspects of HIV disease management using a computer simulation model of HIV disease (the CEPAC model)
- Coordinate and help design analyses with project teams, including US and international collaborators across multiple sites
- Develop new components of the CEPAC model or new, independent simulation models as needed for specific research projects and policy analyses
- Perform literature reviews and synthesize relevant data for these projects with biostatistics staff; work with these staff to convert published data into appropriate model input parameters

- Assist with documentation of the model
- Work to refine disease models and research processes alongside other research staff (project manager, investigators, software engineer, and research assistants)
- Document research process thoroughly and consistently
- Troubleshoot model inconsistencies (bugs)
- Lead abstract and manuscript preparation, as well as presentation of study results for multiple projects at a time
- Present research at working group meetings
- Attend and present research at national and international scientific meetings
- Provide guidance to research assistants, particularly regarding methodological issues
- Assist in the preparation of grant applications and related documents
- Assist in the training of new employees/research assistants in use of the CEPAC model, including maintenance of training materials
- Other duties as assigned

**QUALIFICATIONS:**

The position requires a master's degree, with a strong background in quantitative coursework and research.

Qualifications include the following:

- MS or MPH with a focus on Decision Science, Operations Research, Applied Computation, Applied Mathematics, Biostatistics, Epidemiology, Health Economics, Health Policy, Global Health, or related area
- Minimum of 3 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, such as Markov and Monte Carlo simulation models, as well as compartmental and agent-based epidemiological models, experience in deterministic and probabilistic sensitivity analysis, and ability to solve technical problems in these areas
- Superior writing, presentation, and organizational skills for preparation of abstracts, manuscripts, grants, and contracts
- 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
- Organization, efficiency, and attention to detail
- Intellectual independence and initiative
- Ability to work independently as well as part of a collaborative team
- Experience in public health, health economics, and health policy, preferably in HIV/AIDS and/or TB 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:**

None.

*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.*