



## Postdoctoral Fellowship in Health Policy Modeling

The Institute for Technology Assessment at Massachusetts General Hospital and Harvard Medical School has an opening for a postdoctoral fellowship. The primary role would be to conduct health policy analytics and modeling research to inform policies and optimal clinical decisions in at least one of these disease areas: global elimination of *hepatitis C*, interventions to control *coronavirus/COVID-19*, *non-alcoholic fatty liver disease* screening/treatment. There could be opportunities to work with stakeholders such as the World Health Organization, the Department of Health and Human Services, the National Institutes of Health, and other organizations.

### KEY FUNCTIONS

- Develop simulation models for decision analysis, cost-effectiveness analysis, projection of disease burden, budget impact, and value of information analysis.
- Develop risk prediction models using machine learning methods such as artificial neural networks and other advanced analytic methods
- Work with the research team on advancement of methods for cost-effectiveness analysis and modeling
- In coordination with the principal investigator, lead the research team in writing manuscripts and grant applications.

### QUALIFICATIONS

- Expertise in agent-based modeling, microsimulation, compartmental modeling, data analytics, and visualization.
- Hands-on experience of some common machine learning methods.
- Working knowledge of general-purpose programming languages such as C++, Java, R, or MATLAB.
- Strong quantitative as well as writing skills.

### EDUCATION

Doctorate Degree in industrial engineering, operations research, computer science, health services research, or related quantitative field.

### EXPERIENCE

Required: Hands-on experience of building simulation models (e.g., agent-based, discrete event simulation) using general-purpose programming languages such as C++, Java, Excel VBA, and MATLAB; Prior experience of applying OR to public health and medical decision-making is highly desired; working knowledge of data analytics methods.

**START DATE:** Summer/Fall 2020

### TERMS AND CONTACT INFORMATION

The fellowship is a one-year, full-time commitment, renewable for a second year upon mutual consent. There will be opportunities for the fellow to write and submit his/her individual grant (e.g. NIH career development award (K)) with the support of the PIs and the institution.

Interested candidates should submit their CVs and a detailed cover letter to Prof. Jag Chhatwal, [JagChhatwal@mgh.harvard.edu](mailto:JagChhatwal@mgh.harvard.edu) with subject: "**Postdoctoral Fellowship Application**"  
Contact address: MGH-ITA 101 Merrimac Street #1010, Boston, MA 02114