Postdoctoral Fellow at Harvard/MGH

Opioids Systems Modeling

The Institute for Technology Assessment at Massachusetts General Hospital and Harvard Medical School seeks a postdoctoral fellow for developing an opioids systems model. This model aims to improve and inform the national-level decision and policy making necessary to address the opioid crisis.

Working in an interdisciplinary research group, the candidate will develop and quantify the model and verify its ability to provide realistic outputs historically, and into the future; and use the verified model to answer key policy questions and identify the best combination of interventions to combat the opioid crisis. The model is developed using system dynamics with close collaboration with the FDA. Candidates are expected to have a strong data analytics background and be familiar with the databases (NSDUH, TEDS, and CDC’s WONDER, among others) and literature related to prescription opioids and heroin.

This position is best for individuals interested in a faculty position in the field of data analytics and systems science applied to healthcare or medical decision making. This is a one-year position, with the expectation of renewal for a second year upon mutual consent. The postdoctoral fellow will directly report to the Principal Investigator (Dr. Jalali).

PRINCIPAL DUTIES & RESPONSIBILITIES:

Anticipated responsibilities include:

1) Assisting the team in conceptualizing new model mechanisms
2) Statistical analysis of various opioid datasets
3) Providing support in generating parameter inputs and running of the simulation model
4) Analyzing the model outputs and conducting sensitivity analysis
5) Review and assimilation of the opioid literature
6) Leading scientific manuscript preparation and writing
7) Documenting the workflow and data analysis procedure
8) Composition of presentations & presentation of the results
9) Supporting the preparations of grant applications and reports

Creative thinking, ability to work independently, willingness to learn new software and skills, and the ability to handle multiple tasks are expected. Priority goes to highly motivated and organized individuals, committed to doing impactful research, with great attention to details.

SKILLS & COMPETENCIES REQUIRED:

- A strong interest in public health and health policy aspects related to the opioid research
- Proficiency in at least one statistical software (Stata or SAS preferred)
- Proficiency in at least one programming language
- Experience in simulation (especially but not necessarily system dynamics), mathematical, or statistical modeling
- Excellent writing skills for contributing to article and grant writing
- Ability to perform literature searches and critically analyze the literature
- Strong work ethic and excellent organization skills
EDUCATION & FIELD OF STUDY:

- A doctoral degree in health policy, biostatistics epidemiology, social sciences, mathematics, operations research, or systems engineering is required.
- Familiarity with opioid research (data analysis and population-based outcome research or policy analytics) is preferred.
- Experience with cost effectiveness analysis is preferred.
- Experience with simulation modeling is a plus.

EXPERIENCE:
Zero to two years of research or working experience

WORKING CONDITIONS:
Candidates will work closely with Dr. Jalali in a collaborative, productive, and friendly research team at the Institute for Technology Assessment: 101 Merrimac St, Boston, MA 02114. Access to desktop or laptop computer with relevant software, local area network and printer access, telephone services, and general office supplies as needed.

START DATE:
Selected candidates can join the project immediately. PhD candidates graduating in May 2020 are also encouraged to apply.

HOW TO APPLY:
Send your CV and a cover letter to Dr. Mohammad Jalali ('MJ') at msjalali@mgh.harvard.edu; (subject line: Postdoctoral Fellow). Feel free to ask any questions.

DEADLINE:
No hard deadline but applicants are recommended to submit their applications as soon as possible.