

**Postdoctoral Fellowship in Epidemiology and Biomedical Informatics**  
**Harvard TH Chan School of Public Health**  
**Department of Epidemiology**

**Position Overview**

The Department of Epidemiology at Harvard TH Chan School of Public Health seeks a highly motivated Postdoctoral Fellow to join Dr. Michelle Williams' research group. This position focuses on conducting real-world evidence studies to examine etiological hypotheses in women's health, reproductive, and perinatal epidemiology using innovative digital cohort approaches and advanced computational methods.

The successful candidate will work with an engaged group of scientists on cutting-edge research that combines epidemiological methods with biomedical informatics. The position offers the opportunity to analyze large multinational databases from prospective longitudinal studies, digital cohort studies, and integrated electronic health records.

**Research Focus**

The postdoctoral fellow will collaborate with epidemiologists, statisticians, and computer scientists across Harvard and collaborating universities to address emerging questions in women's health, perinatal, and reproductive health. Key research areas include: (1) the application of artificial intelligence analytical methods, (2) predictive modeling approaches, and (3) large language models to analyze complex health data. Specific focus areas encompass electronic health records analysis, causal inference methodology, natural language processing, generative AI applications, dynamic risk prediction modeling for high-dimensional clinical surveillance and omics data, and machine learning approaches for time-to-event outcomes.

**Primary Responsibilities**

The fellow will work independently while contributing to team initiatives. Core responsibilities include designing and implementing research protocols for large-scale digital cohort studies, conducting sophisticated statistical analyses, and leading the preparation of manuscripts for peer-reviewed publication. The position involves managing and analyzing complex longitudinal datasets, developing novel methodological approaches, and presenting findings at national and international conferences.

**Required Qualifications**

- Ph.D. in Epidemiology, Biostatistics, Biomedical Informatics, or a closely related field
- Strong programming skills in R (required); experience with SQL or other database systems is advantageous
- Demonstrated expertise in statistical analysis and research methodology
- Strong track record of peer-reviewed publications
- Exceptional analytical and problem-solving capabilities
- Advanced skills in research data systems and database design

- Outstanding verbal and written communication abilities
- Proven ability to work both independently and collaboratively
- Detail-oriented approach with strong project management skills

### **Preferred Qualifications**

- Experience with digital health research or large cohort studies
- Background in women's health research
- Expertise in machine learning applications in healthcare
- Grant writing experience
- Experience mentoring junior researchers
- Demonstrated ability to manage multiple concurrent projects

### **Professional Development Opportunities**

The position offers extensive opportunities for growth, including collaboration with leading researchers, travel to global research sites, mentoring pre-doctoral students, access to Harvard's world-class research facilities, participation in departmental seminars, and professional development activities. The role provides a clear pathway for career advancement within academic medicine.

### **Appointment Details**

This is a full-time position with an initial two-year appointment and possibility of extension based on performance and funding availability. Salary will be commensurate with experience and aligned with Harvard University guidelines for postdoctoral scholars.

### **Application Requirements**

Please submit:

- Cover letter describing research interests and career goals
- Curriculum vitae
- Three letters of recommendation
- Two writing samples (published papers or manuscripts)

Harvard University's TH Chan School of Public Health is an equal opportunity employer and actively seeks a diverse pool of candidates.

Please send materials to: Dr. Diana Juvinao-Quintero [djq@hsph.harvard.edu](mailto:djq@hsph.harvard.edu)