

Faculty Position
Chief Data Scientist and Lead Biomedical Informatician, FDA Sentinel Operations Center
Assistant / Associate Professor
Department of Population Medicine
Harvard Pilgrim Health Care Institute

The Department of Population Medicine (DPM) at the Harvard Pilgrim Health Care Institute (www.populationmedicine.org), a Harvard Medical School affiliate, seeks a faculty member to lead the data science and biomedical informatics work of its Division of Therapeutics Research and Infectious Disease Epidemiology (TIDE). TIDE is the home of several large, complex, multi-institutional research initiatives using real-world data (RWD) and distributed analytic approaches to support major national public health activities in collaboration with federal and industry funders. Its mission is to improve health care delivery and population health through research and education, in partnership with health plans, delivery systems, and public health agencies.

The proposed academic appointment will be as Assistant / Associate Professor of Population Medicine at Harvard Medical School, commensurate with qualifications. The faculty member will serve as Chief Data Scientist for the FDA's Sentinel Operations Center (www.sentinelinitiative.org/), the nation's largest distributed public health and research data network. Responsibilities include leading strategic planning and implementation of system architecture, data models, ontologies, and querying strategies.

In addition to its work with FDA, TIDE leads an array of multi-institutional research and public health initiatives, involving distributed analysis of administrative health claims data, registries, electronic health record (EHR) data, and patient-generated data, as well as direct outreach to clinicians and patients. These initiatives may offer additional research opportunities depending on program needs and candidate interests. TIDE's portfolio includes:

- Partnership with HCA Healthcare, a 186-hospital network, to conduct large scale cluster-randomized clinical trials and observational studies
- Leadership of the NIH Health Care Systems Collaboratory's Distributed Research Network (www.rethinkingclinicaltrials.org/nih-collaboratory-drm/), which conducts multi-center pragmatic clinical trials and observational studies embedded in health plans
- Leadership of a CDC Prevention Epicenter (www.cdc.gov/hai/epicenters)
- Leadership of MDPHnet/ESPnet (www.esphealth.org), networks that provide real-time EHR-based surveillance of both infectious and chronic disease
- Leadership of multiple industry-funded research projects on medical product safety and effectiveness

The faculty member will initiate and provide strategic guidance regarding informatics aspects of TIDE's collaborative research focused on the use of RWD in support of pharmacoepidemiologic research, comparative effectiveness studies, public health surveillance, and health services research and practice. They will engage the data science and biomedical informatics community to ensure TIDE's alignment with developing areas of research. They will oversee and guide a TIDE-wide data science, distributed querying, and software platform ecosystem to enable and advance scholarly endeavors.

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Additional activities include:

- Lead a portfolio of investigator-initiated research through extramural funding.
- Collaborate with other TIDE and DPM faculty members, external partners, and external funders to expand the use of RWD.
- Lead or participate in design or update of common data models, new tools and methods for extracting, standardizing, and analyzing various RWD sources for multi-site studies, including novel approaches for assessing data quality and completeness.
- Architect the ecosystem roadmap, participate in all aspects of technical infrastructure, including assessment of internal and external dependencies across projects to identify efficiencies.
- Identify and seek funding opportunities to advance the software and tools used to support our public health initiatives.

The ideal candidate for this position will have the following qualifications:

- Doctoral degree in biomedical informatics, data science, statistics, epidemiology, or related fields
- Knowledge of current state of research and deployment of administrative data, electronic health records, and methods for obtaining and using patient generated data
- Demonstrated capacity for program development and leadership
- Proven ability to lead and work in multi-disciplinary teams
- A record of funded grant proposals
- A record of high-quality peer-reviewed publications
- Strong interpersonal and leadership skills

Besides their principal administrative and research activities, the faculty member will also spend a portion of time participating in the broader missions of the department and medical school including:

- Establish and maintain contacts with the Harvard informatics community, including the Harvard Center for Computational Biomedicine, and other researchers, in the university and within existing research partnerships.
- Teach and mentor students, residents, graduate students, or research fellows.
- Contribute to departmental administration as a member of committees.

Clinicians may include part-time practice in their activities. Joint appointment in a second Harvard Medical School department or another Harvard faculty such as the T.H. Chan School of Public Health may be appropriate.

Candidates from backgrounds underrepresented in medicine are especially encouraged to apply.

Candidates should send their CV, cover letter, and a statement of research interests to:

Darren Toh, ScD, Professor, Department of Population Medicine
c/o TIDEFacultysearch@harvardpilgrim.org

The Harvard Pilgrim Health Care Institute is committed to building and nurturing an inclusive professional community in which diversity is valued and every person feels they have a rightful place, are welcome and

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respected, and are supported in their endeavors. We welcome applications from members of groups underrepresented in the biomedical sciences, people of all genders, veterans, and individuals with disabilities.

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.

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