Host site: Maryland Department of Health Public Health Services, Office of the Deputy Secretary

Assignment Location: Baltimore, MD

Primary Mentor: Katherine Feldman DVM, MPH, DACVPM

Secondary Mentor: Jessica Acharya, MPH

Agency Description:

The Maryland Department of Health (MDH or the Department) is a state level public health department whose goal is to protect, promote, and improve the health and well-being of all Maryland residents. The Department is made up of several entities to help carry out the goals and objectives of the Governor of Maryland and Secretary of Health. As part of MDH, Public Health Services (PHS) is committed to improving the health status of individuals, families and communities through prevention, early intervention, surveillance and treatment. PHS oversees vital public services to Maryland’s 6 million residents including infectious disease and environmental health concerns, family health services and emergency preparedness and response activities. PHS consists of 11 distinct administrations, offices, facilities and boards. The full public health system in Maryland includes the Department and 24 local health departments (LHDs) – one each in Baltimore City and Maryland’s 23 counties. Each LHD is led by an appointed Health Officer (HO) who is responsible for appointing staff and enforcing the health laws and policies adopted by the State and local jurisdiction. The HO is nominated by each local governing body and appointed by the MDH Secretary of Health, except for Baltimore City, which has a locally nominated and approved HO. The HO, as part of the Department, is overseen by PHS and the Deputy Secretary for Public Health Services.

MDH has been critical to Maryland’s pandemic response, from leading testing and tracing efforts to coordinating vaccination campaigns to support outbreak control. Through the crisis, our state and local health departments have led in spite of the obstacles posed by insufficient resources, inadequate infrastructure, and institutional silos—challenges which long predate the pandemic. As MDH reflects on it pandemic posture, it is critical that the foundational public health data infrastructure is in a better place than it was pre-pandemic, given the tremendous investments made to respond to the pandemic and because of funding made available in response to the recognition of outdated and eroded public health infrastructure. As an agency priority, the MDH Deputy Secretary for Public Health Services (PHS) is launching a PHS Data Modernization Strategy in response to the recognized and urgent need for data modernization within PHS and Maryland’s LHDs to advance local and state public health practice, including for preparedness and response.
The PHS Data Modernization Strategy will address multiple points in the data collection-storage-analysis continuum and strengthen the data science and informatics workforce. The goals of the PHS Data Modernization Strategy are to:

1. Strategically propel MDH Public Health Services Administration forward with data modernization activities, in alignment with current local, state and national data modernization priorities and federal funding requirements

2. Modernize Maryland public health data systems to arrive at state-of-the-art, fully interoperable systems and tools for effective day-to-day public health practice at the local, state, and national levels

3. Strengthen the Maryland state and local public health workforce in data science, informatics and health information technology systems

4. Position PHS to readily meet re-accreditation standards and measures

The office culture is a fast-paced, high-pressure environment as it is directly within the Office of the Deputy Secretary with close collaboration with the Office of the Secretary and Governor’s Office.

Assignment Description:

The fellow will be placed within the Office of the Deputy Secretary for Public Health Services among a small Data Modernization team, led by Dr. Feldman and Mrs. Acharya. The fellow will perform a broad and moderately complex range of tasks associated with public health informatics responsibilities including but not limited to: being part of a team to conduct surveillance system and workforce assessments, and policy development for optimization efforts (Project 1), as well as individual-level training, and broad workforce informatic enhancement strategy development (time permitting, Project 2) as well as any other competency building functions related to public health informatics of interest to the fellow.

Preferred Background & Skills:

Preferred background would be a Master’s degree or higher from an accredited graduate school with a focus in public health informatics, health care informatics, information technology, computer science, information science, public policy or health policy, statistics or related field; familiarity public health, public health surveillance systems, public health or health informatics and epidemiologic practices in order to plan for improvements as well as ability and skills to analyze, interpret, and summarize data and prepare reports.
What can the fellow expect to gain from 2 years at this host site?

The fellow will have the opportunity to gain competency not only in public health (e.g. applying knowledge to improve population-based health through understanding of surveillance systems and epidemiology etc), data science and informatics (e.g. analytics, synthesizing public health information, using information technology to access, collect, and analyze data and information) but also leadership, management, and public health policy working in a fast-paced environment with close access to a high-priority initiative of MDH executive leadership. Through assigned tasks in project 1 specifically, the fellow will gain tangible knowledge, skills, and abilities including information system/ surveillance system assessment (e.g. technical review, system documentation, requirements management), data exchange & interoperability (e.g., standards, ETL, system design & implementation), governance (e.g., policy, planning & coordination, privacy, security), data analytics (e.g. visualization, statistical analysis, etc), and project management (e.g. balancing competing demands, coordinating diverse stakeholders, documenting project status). Additionally, the experience of working at a state health department is equally valuable in the soft skills gained, including communication, critical thinking and navigating government organizations with dynamics across the layers of technology, human, and organization that can determine a project's success or failure.

Potential Projects include:

Host sites have listed up to 5 projects

Project 1: Goal 1: Strategically propel MDH Public Health Services Administration forward with data modernization activities

Objective 1.1: By December 15, 2021, conduct systematic assessment using CDC assessment tool of the current state of informatics, data science and health information systems in PHS and LHDs (data systems and workforce)  Objective 1.2: By mid-winter 2022, convene a PHS Data Modernization kick-off meeting to review initial assessment findings, collectively review federal priorities and requirements, propose next steps, and establish structure (or integrate with existing structure) for data governance.  Objective 1.3: By Spring 2022, conduct “deeper dive“ systematic assessment of data systems that contributed to the COVID-19 response and are aligned with CDC assessment tool areas of interest e.g. National Electronic Disease Surveillance System, CovidLINK, ESSENCE, and ImmuNet  Objective 1.4: By Summer 2022, develop PHS data modernization strategic plan incorporating findings from the CDC systematic assessment, COVID-19 deeper dive, and findings from other assessments  Objective 1.5: By Summer 2022, develop PHS data modernization workforce development plan to support the development of data and analytics capacity throughout PHS, incorporating findings from the CDC systematic assessment and findings from other assessments  Deliverables: 1. COVID-19 Data Systems Assessment, 2. PHS Data Modernization Strategic Plan, 3. Supplemental Data Modernization Workforce Development Plan
The development and implementation of a PHS Data Modernization Strategy will help to achieve the following short- and long-term public health outcomes: 1. Improved day-to-day public health activities at MDH and in Maryland local health departments, from more timely and complete identification of individual cases and outbreaks, to ongoing monitoring of public health trends, to more effective response to large-scale pandemics 2. Real-time, linked public health data systems that provide better, faster, more complete, and more coordinated data (to recognize and respond to emerging public health issues, to identify inequities, and for evidence-informed practice and decision making); 3. Skilled and effective data science and informatics workforce at MDH and Maryland local health departments to support data systems and analytics; 4. Timely and complete data reporting to the CDC; 5. Maryland residents are better protected from all types of public health issues.

Project 2: Goal 3: Strengthen the Maryland state and local public health workforce in data science, informatics and health information technology systems

Objective 3.4: By Spring 2022, establish monthly data visualization trainings for epidemiologists
Objective 3.5: By Spring 2022, identify informatics or data science training
Objective 3.6: By Spring 2022, develop a Community of Practice for data science and informatics
Objective 3.7: By Summer 2022, have 80% of PHS epidemiologists and informatics specialists complete an online informatics training (e.g., E-learning course – Introduction to Public Health Informatics)
Objective 3.8: By Winter 2022, and in coordination with MDH Office of Human Resources and Maryland Department of Budget and Management, develop Informatics Specialist classification series.

This project is time permitting to ensure workforce development is implemented alongside the strategy development.

Additional information about the placement:

Nothing additional to add at this time.