Host site: Minnesota Department of Health Office of Data Strategy and Interoperability

Assignment Location: St. Paul, MN

Primary Mentor: Aasa Dahlberg Schmit  Bachelor of Computer Science

Secondary Mentor: Chris Brueske, BA

Agency Description:

Minnesota’s public health system is known as one of the best in the nation. It is built upon a strong partnership between the Minnesota Department of Health (MDH), local public health agencies, tribal governments and a range of other organizations. The department’s mission is to protect, maintain and improve the health of all Minnesotans. It has about 1,500 employees and an annual budget of approximately $500 million in state, federal and fee-based funds. An agency overview can be found here: https://www.health.state.mn.us/about/index.html.

Assignment Description:

The fellow will work out to the Office of Data Strategy and Interoperability (DSI), located in the EO/Health Operation Bureau. The office provides vision, direction and leadership in advancing enterprise data strategies and data exchanges across programs of MDH. The placement of the fellow into DSI provides an opportunity for the fellow to engage and participate in projects across the agency and with external data exchange partners. We have identified a number of projects the fellow will either lead or be engaged in, but the nature of the work in DSI is very flexible and the fellow will be included in applicable day-to-day activities as they are identified. The DSI office has an all staff meeting twice/month and regular check-ins between supervisors and staff.

Preferred Background & Skills:

Experience with data science, knowledge of promoting interoperability activities and the data standards related to PI projects. Knowledge of case reporting and electronic lab reporting. Knowledge about and interest in how to tell stories with data, especially related to health equity. Visualization tools experience. Data analytics experience.

What can the fellow expect to gain from 2 years at this host site?

Knowledge and understanding of the complexity of informatics in a public health setting. Understanding of datasets and standards used. Knowledge about data lakes capability. Deep understanding of eCR and ELR data and how it’s used. Plain language communication about data and effective data visualization. Understanding of data governance and statutory compliance.
Potential Projects include:

Host sites have listed up to 5 projects

Project 1: Electronic Case Reporting Metrics

The objective of the eCR onboarding project is to add more facilities who are sending eCRs to MDH as well as increasing the number of data elements mapped to discrete elements in our MEDSS system. A part of this project is to work with our data lakes team to identify and build out views for eCR data, make the data available for SQL querying and to build Tableau dashboards for metrics related to data quality and onboarding progress. This project is currently moving from an IT implementation project to a MDH lead onboarding/expansion project. We also have a sub project where the Fellow will take the lead, this is an Analysis project, to compare how ELR data/data quality compare to ECR data fields/quality (for race/ethnicity data in particular).

The eCR project is aimed at reducing the burden of reporting of case reports and to provide better and more timely case information for public health. By evaluating the quality of key demographic data (such as race/ethnicity) we can improve the ability to identify vulnerable populations and/or populations with higher prevalence of disease.

Project 2: Data Lake Lifecycle Assessment

1. Evaluate infrastructure use and identify quality improvements.
2. Complete a data lifecycle assessment for data into the data lake.

The data lakes project aims at providing access to data across siloed systems and provide the capability to use data in new ways.

Project 3: Blood lead surveillance data system modernization

1. Migration of child blood lead laboratory surveillance data to MEDSS.
2. Implementation plan and evaluation.
3. Blood lead data analysis, visualization, and dissemination.

Modernizing Minnesota’s blood lead surveillance system will provide staff and partners with higher quality data, including more complete race/ethnicity information to identify and track lead exposure disparities and evaluate the effectiveness of public health interventions. This project will be lead by the MN Lead & Health Homes program at MDH, learn more here: https://www.health.state.mn.us/communities/environment/lead/index.html

Project 4: Public data portal modernization to Tableau
1. Participate in planning, implementation and evaluation of modernizing the MN Public Health Data Access Portal to Tableau data systems.
2. Develop user-friendly interactive dashboards to share information on trends, maps, and risk factors.
3. Increase availability and customizability of data for end users.
4. Conduct key informant interviews and other needs assessment/evaluation activities with Local Public Health, community, and other partners. This DMI project is sponsored by the Environmental Public Health Tracking program. The content area of focus for the fellow will be biomonitoring data from NHANES and MN projects, with a focus on telling data stories about health inequities using Tableau. Visit our portal here: https://data.web.health.state.mn.us/web/mndata

The content area of focus for the fellow will be biomonitoring data from NHANES and MN projects, with a focus on telling data stories about health inequities using Tableau. Biomonitoring data are important for informing public health interventions and policy actions. We can be doing more with this data and for our partners with better public data sharing and tools. This DMI project is sponsored by the Environmental Public Health Tracking program. Visit our portal here: https://data.web.health.state.mn.us/web/mndata

Project 5: Centralized data sets, processes, and tools

1. Work with inter-agency team to gather data standards for data sets with high shared value and need for consistency (e.g., census denominator data).
2. Promote best practices for data governance.
3. Work with internal stakeholders to identify shared data needs.

Efficient and consistent shared data resources will improve analysis quality and timeliness. This seems like a simple project, but gathering, communicating, and creating repeatable processes and standards for shared data are foundational aspects of successful data/technology projects.