Host site: Alaska Department of Health and Social Services Office of the Commissioner; Division of Public Health

Assignment Location: Anchorage, AK

**Primary Mentor:** Carrie Paykoc, Master of Science; Management and Organizations; Masters of Business; Health Administration

**Secondary Mentor:** Dr. Rosa Avila, Dr. Avila has received a Master of Science in Public Health and a PhD in Public Health, Health Services Research

**Agency Description:**

The Department of Health and Social Services (DHSS), Commissioner’s Office oversees the activities of 10 divisions, including the Alaska Division of Public Health (DPH), the state’s public health agency, which is divided into 9 sections. All communities in Alaska, except Anchorage, do not have a local public health department, therefore DPH addresses both local and state public health needs.

DPH’s mission is to promote the health of Alaskans. This is derived from Article VII of the Alaska Constitution which states, “the legislature shall provide for the promotion and protection of public health” and Alaska Statute AS 18.05.010(a) Section 18.05.010 Administration of laws by department. The CSTE Informatics fellowship will help support DPH's Strategic Goal #2 “Increase availability of reliable, trusted public health data to improve the health of Alaskans,” and more specifically Objective #3, “Implement data integration efforts within the Division of Public Health to optimize data utility.”

**Assignment Description:**

CSTE Fellow will be splitting their time mainly between the Department of Health and Human Services (DHSS), Office of the Commissioner’s office and in the Division of Public Health, Health Analytics and Vital Records Section (HAVRS). Day-to-day activities include:

- Applying a health equity lens to all day-to-day activities and data projects.
- Collaborating with internal and external partners. This includes other Department team members and CDC fellows.
- Conducting databases management activities such as data linkages, data cleaning, and other quality control activities to integrate data from various data sources and improve data quality.
- Assisting in analyzing, recommending, testing, implementing, and evaluating new or modified informatics solutions and data structures that support the program in the statewide delivery, administration, and management of services.

- Researching and preparing presentations, reports, whitepapers, and reference materials related to information systems and related services.

- Developing data tools that are interactive and accessible for data dissemination and/or data sharing purposes.

- Participating in data science, data standard, interoperability, health equity, and innovation learning and educational opportunities to advance knowledge and professional development.

- Attending and representing the Department of Health and Social Services at local and national educational events, webinars, networking, and collaboratives. Provide the Department key insights and recommendations based on findings.

- Developing and submitting speaker and poster session applications on behalf of the Department.

**Preferred Background & Skills:**

Experience managing databases, which includes the ability to utilize statistical software (SAS or R) or SQL Server Management Studio to link datasets, clean data, and substitute missing information. An understanding of application programming interface (API) linkages, HL7 Fast Healthcare Interoperability Resources (FHIR) standards, and ICD-10 codes would be helpful for incumbent fellow. The ability to work across teams of public health and technical experts.

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

Considerable knowledge of state public health databases and surveillance programs. Knowledge of the principles and methods used in the analysis and development of integrated data systems and reporting. Knowledge of the principles and methods used in data sharing and visualization platforms for developing and managing data tools that improve data access. Ability to communicate the organization's information system needs to information system providers and represent information system users in the design of systems. Ability to analyze data, operations, complex issues, and situations of which some are highly confidential and/or sensitive. Ability to problem solve and think creatively.

**Potential Projects include:**

*Host sites have listed up to 5 projects*
Project 1: Advancing the Data and Analytics System for the Department of Health and Social Services

This project is focused on advancing the technical infrastructure to support state goals and objectives. This system or technical back bone will enable the Department to share information with through the public DHSS website, referral system, and enable meaningful metrics and visualization focused on improving health and reducing costs. Project objectives and expected deliverables

Objectives:

1) Define current and future state data and analytics systems of the entire Department of Health and Human Services, leveraging the assessment underway with the DMI project.

2) Support the development of a data and information governance model that includes key stakeholders and members of the public. This ensures information is being used in a trusted, secure, and transparent manner.

3) Define DHSS goals and outcomes that the data and analytics system will address.

4) Define and support the implementation of a training and education for all system users.

Deliverable:

1) Current and future state data flow, architectural diagrams, and user stories

2) Whitepaper on DHSS Data and Analytics Modernization Efforts

Throughout this process defined by the objectives and deliverables, the CSTE Fellow will work with the Chief Health Informatics Officer (CHIO) to define the public health use cases and quantifiable metrics to measure the impact to public health. Overall, the goals of the data and analytics system are to decrease health care cost, improve quality, ensure access, support public health response, and improve the patient experience. The CSTE Fellow will support the CHIO with defining the specific measures and metrics that will be tracked and reported over the course of the fellowship. As the State of Alaska is at the beginning of their data modernization, the metrics will be focused on automation and efficiencies related to this work. For example, enabling application program interfaces (API) to send/receive data to the public reduces numerous hours spent by the state and the public in manually sharing this information. This project builds upon the state’s COVID-19 public health response efforts, the CDC DMI project, and the Alaska Health Care Transformation Project. The Alaskan Health Care Transformation Project aspired to enable a data and analytics system that integrates health, social, and financial information including public health registries to support policy making and value-based payment, provide a one-stop shop for information and analytics, and reduce administrative burden with quality measure reporting.

Project 2: Data linkage project for the Alaska Cancer Registry to Populate the Four COVID-19 Data Items
The North American Association of Central Cancer Registries (NAACCR) coordinates the standardization of data items and how they are coded for the cancer registries in the United States and Canada. New versions of this standard (called the NAACCR Record Layout) are released on an annual basis. As of diagnosis year 2021, four COVID-19-related data items were introduced to the NAACCR Record Layout standard. The purpose of these data items is to evaluate the impact of a COVID-19 diagnosis on cancer patients, and these data are to be collected for cancer patients diagnosed in 2020 and 2021. This work will align, leverage, and advance the Alaska Cancer Registry Data Modernization Initiative. Objectives: To integrate data from the Divisions of Public Health data sources with cancer surveillance data to identify incident cases with positive COVID-19 diagnosis. Deliverable: 2020 cancer surveillance dataset with COVID-19 diagnosis.

This project will help answer questions on what the impact was on cancer patients during the pandemic in 2020, and establish procedures to continue to track these metrics in later years. Overall, the goals of this project is to improve quality, ensure completeness, support public health response, and improve the patient experience.

Project 3: Coordinate interjurisdictional bidirectional laboratory results data exchange between Alaska’s Section of Epidemiology and other jurisdictions.

Coordinate interjurisdictional bidirectional laboratory results data exchange between Alaska’s Section of Epidemiology and other jurisdictions includes specific tasks, objectives, and expected deliverables. Specific tasks include utilizing the existing Inter-Partner Data Exchange materials to identify potential jurisdictions, outreaching jurisdictional contacts to verify willingness/interest, engaging with APHL’s Technical Assistance process to request placement in queue for onboarding projects, attending project meetings, utilizing the electronic disease surveillance system to identify datasets for validation and testing, and communicating with partners during onboarding. The fellow would participate as a team member during one or two rounds of interjurisdictional onboarding, and gradually grow responsibilities to lead these projects over time. Objectives: To onboard bidirectional interjurisdictional lab results feeds with at least five states. Deliverable: Improved access to bidirectional interjurisdictional lab reporting and increase completeness of data.

Establishing automated electronic data transfer integrated within the surveillance system is a targeted priority established by both the Division as well as the CDC and specific CDC initiatives such as ELC, Health Information Systems HIS, and Data Modernization Initiatives DMI. Successful completion of inter-partner data feed onboarding will reduce manual effort to provide these data to other states, allowing epidemiologists to dedicate that time to other essential duties.

Additional information about the placement:

Excited for the opportunity! No further details to add.