

ID: 60607304

Infectious Diseases, Chronic Disease - Host Site Description

North Dakota Department of Health and Human Services

Assignment Location: Bismarck, US-ND
North Dakota Department of Health and Human Services
Health Statistics and Performance Section

Primary Mentor: Tracy Miller, PhD, MPH
State Epidemiologist
ND Health and Human Services Public Health Division

Secondary Mentor: Benjamin Schram, MPH
Director, Data Modernization Office
ND Health and Human Services Public Health Division

Work Environment

Hybrid

Assignment Description

The fellow will be located within the Health Statistics and Performance (HSP) Section. This Section manages vital records and provides epidemiology and data analysis support to all sections and units in the health department. This section reflects the new atmosphere of the department that recognized the need for a cross-cutting office with department-wide responsibilities. This office was established in July 2017.

Responsibilities of the section include investigating or providing consultation on disease outbreaks; identifying and implementing various databases and surveillance systems; informatics needs, data analysis, data stewardship, developing guidelines for data management, and supporting statewide epidemiologic infrastructure.

The Fellow will be exposed to a wide variety of projects in applied public health epidemiology. The Fellow will be responsible for special analyses and projects, but involvement in other projects going on in the division will be strongly encouraged to assure exposure to communicable disease, chronic disease, maternal and child health, and emergency preparedness program activities. Projects will focus on program evaluation, surveillance, data acquisition, data analysis and report writing.

This fellowship entails a variety of research, surveillance, and evaluation opportunities. These activities will involve close collaboration with agencies at the federal, state, and local level, private and non-profit organizations and academic institutions. The HSP section has access to numerous data sets, including but not limited to hospital discharge, prescription drug monitoring program, BRFSS, acute disease surveillance data, immunization registry data, injury, newborn screening and syndromic data. However, because we are a small health department, our capacity to conduct data analyses, research, surveillance, and evaluation beyond the necessary requirements is often hindered. The fellow can take a leadership role in carrying out these additional activities based on his/her interests, fellowship competency requirements, and agency needs.

While at the department, the fellow will be treated as any newly hired epidemiologists and will be offered the same rights and privileges. Their day-to-day activities may include data collection, data analysis, database development, informatics determinations, reporting writing and education development. The Fellow will participate in staff meetings and epidemiology workgroup meetings. At these meetings, situational awareness, data needs and special projects are discussed. Additionally the fellow will be collaborating with external partners through in-person or virtual communication.

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Describe Statistical and Data Analysis Support, Such as Databases, Software, and Surveillance Systems Available to the Fellow

The HSP Section has access to a variety of data sets/databases, including but not limited to hospital discharge, prescription drug monitoring program, BRFSS, acute disease surveillance data, immunization registry data, injury, newborn screening and syndromic data. Additionally, the Fellow will work to establish a protocol for acquiring regular submissions of data from the Medicaid, Law Enforcement and Tribal entities.

Statistical software includes SAS, R, Python, SPSS, Epi Info, Azure Machine learning, Power Bi and Excel.

Projects

Surveillance Activity Title: Identification of Immunization Rates among Medicaid Recipients

Surveillance Activity Description:

Fellow would collaborate with the ND Immunization Information System (NDIIS) manager to obtain vaccine data. Utilizing this data they will perform any data clean up needed and format the data for visibility. The fellow will need to work with the immunization program personnel to become familiar with all the data caveats regarding doses, age, and timing. Additionally, the fellow will work with the Medicaid program to obtain data for data matching. This will allow for comparisons of what is collected in NDIIS and Medicaid records to ensure completeness of data.

Surveillance Activity Objectives:

The fellow will create a dashboard for immunization rates by age group for Medicaid recipients by vaccine type, state, county, and provider site. Additional variables such as race and gender will also be included.

Surveillance Activity Impact:

This dashboard will be use to inform the Medicaid program regarding the vaccination rates among their clientele and help them to identify gaps and needs among this population.

Surveillance System Evaluation Title: ADT-Feed Data Quality

Surveillance System Evaluation Description:

By July 2024, the Public Health Division will be implementing "electronic case reporting" for the non-infectious reportable conditions (birth defects, NAS, FAS, critical congenital health disease, non-fatal overdoses, suicide attempts, etc) using ICD-10 code recognition among ADT feeds sent to the state's Health Information Network. As feeds are turned on, the data must be evaluated in order to improve reporting and data quality. The fellow will work with HSP and IT personnel, along with other data analysts in the Division to evaluate the data quality, timeliness, etc. along data gaps, needs, etc.

Surveillance System Objectives:

Deliverables would include the identification of data inaccuracies and the corrections. We would also need an evaluation report on the quality of the data, timeliness, and possible ROI report regarding staff time and data entry. We would also like this report submitted for abstract to conference.

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Surveillance System Impact:

Data to inform healthcare providers regarding the need for education about prenatal care, harm reduction, and referral to mental health services. This data can also be provided to community action groups, local public health, etc. to increase the platforms for education, family support and referrals.

Major Project Title: Tribal Data Sharing

Major Project Description:

The North Dakota HHS's Public Health Division (PHD) is entering into data use agreements with the 5 tribes in North Dakota. Currently there is no dedicated personnel associated with this program. The Fellow will work with the HSP's Data Modernization Office (DMO), to help develop a systematic, ongoing collection, management, analysis, and reporting of all named level data to each of the tribal Offices.

Major Project Objectives:

This will require working with DMO, and the Community Engagement Unit.

1. Identifying platform for PHD identifiable data.
2. Working through protocol for obtaining tribal membership data from all participating tribes.
3. Creating governance around matching protocols and audit trails for using tribal data
4. Working with DMO to ensure secure data transfer
5. Ensuring Point of Contact at Tribes for sending data
6. Assist Tribal Offices in developing analytical reports and dashboards of Tribal data

Major Project Impact:

The goal is to provide our tribal partners with the data they will need to improve health and wellness among their citizens.

Additional Project #1 Title: Medicaid Data Matching

Project #1 Type: Surveillance Activity

Project #1 Description:

The fellow will work with the DMO, Lead Program, and Health Tracks to improve on a data matching project to identify Medicaid infants who are being tested for lead. Currently every child on Medicaid at age 1 and age 2 should be tested for lead. Based on preliminary data, this recommendation is not followed.

The fellow will work to conduct a match to determine where these gaps are occurring in the state as well as an evaluation of the data collection process.

Project #1 Objectives and Expected Deliverables:

1. Identifying data sources for matching.
2. Working to integrate surveillance systems or data systems
3. Creating governance around matching protocols
4. Working with DMO to ensure secure data transfer
5. Assist in developing analytical reports

Project #1 Impact:

The goal of this project is to improve testing of lead for Medicaid infants and identify areas for improvement.

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Please Describe the Fellow's Anticipated Role in Preparedness and Response Efforts – Include Activities and Time Allocation (Required Competency of Fellowship)

During times of emergency, data needs increase. The fellow will work with the EPR program to identify data needs to help implement an internal dashboard for situational awareness. This may include infectious disease data, weather data, flood level data, etc.

3-6 months:

- Work with infectious disease program personnel and epidemiologist on data acquisition
- Work with EPR and others in the section for ideas and data needs
- Creating the dashboard

This will not be full time work, but will take time to gather all the data, meet with the group to identify what is wanted, and the creation of the dashboard.

Please Describe the Fellow's Anticipated Role in Cluster and Outbreak Investigations – Include Activities and Time Allocation (Required Competency of Fellowship)

As a small health department, should clusters or outbreaks occur (foodborne, respiratory, TB, etc) .The current foodborne epidemiologist is a former AEF and has indicated a willingness to work with the new fellows.

Time allocation will be dependent on the outbreak/cluster: Our foodborne outbreaks may take a couple weeks whereas our HCV outbreak took months.

The fellow will participate in the following:

- data gathering
- case interviews
- analysis
- report write up

Please Describe the Fellow's Anticipated Role in the COVID-19 Response – Include Activities and Time Allocation

The fellow will work with Vaccine Program and DMO to review flu and covid vaccination rates by school and compare to absenteeism data. This will require identifying data sources for absenteeism data and the best method for obtaining that data reliably. Working with the program to secure a place for the data and ensuring the dashboard meets their need.

This may take 3-6 months (not full time as there will be downtime) to complete.

Please Describe Opportunities for Fellows to Work in Health Equity as well as Incorporating Diversity, Equity, and Inclusion into their Work

North Dakota Department of Health and Human Services has an entire unit dedicated to health equity. There are currently many projects underway, such data standardization, hypertension among pregnant women, improving lead testing among Medicaid recipients, etc. that the AEF would be able to participate in. Additionally, the agency is working on improving tribal data use as well as working to provide resources in areas of the working poor.