

ID: 33816855

Injury, Chronic Disease - Host Site Description

Washington State Department of Health

Assignment Location: Tumwater, US-WA
Washington State Department of Health
Office of Health and Science

Primary Mentor: Maayan Simckes, PhD, MPH
Senior Epidemiologist, Population Survey Supervisor
Washington State Department of Health

Secondary Mentor: Amanda Tjemsland, MPH
Senior Tribal Epidemiologist
Washington State Department of Health

Work Environment

Hybrid

Assignment Description

The AEF Fellow will be housed in the Center for Epidemiology Practice, Equity, and Health Assessment (CEPEA) in the Office of the State Health Officer (OHSO) under the agency's State Epidemiologist for Policy and Practice. Their primary mentor will be the Population Survey Supervisor and secondary mentor will be the Senior Tribal Epidemiologist. Each of these senior epidemiologists sits on the leadership team of CEPEA but also on two separate teams, affording the fellow the chance to engage with two core groups of colleagues.

CEPEA provides agency-wide expertise in epidemiologic and biostatistical methods, often offering coordination and support to agency divisions and teams. Though the position is formally labeled as mental health/substance use and maternal and child health, the projects described below are broadly crosscutting and will allow the fellow to work with epidemiologists with expertise in a variety of areas, including Tribal public health, injury and violence, environmental health, and communicable disease.

The range of projects the fellow will be able to work on will provide them with the chance to develop high proficiency in core applied epidemiologic competencies. Day to day, we anticipate variability depending on the projects the fellow has underway at the time. We envision the fellow being engaged in more than one project at a time, allowing them to experience the reality of being an applied epidemiologist. One day the fellow might spend a few hours getting to know a particular surveillance system followed by a collaborative work session with a multi-agency team focusing on improving adolescent injury prevention. A different day, the fellow might provide support on a cluster investigation, meet with agency leaders to present results on a new Tribal mental health report they developed, and begin analyzing a new dataset.

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

The fellow will be provided with all basic software needed to conduct their work, including the analytic software of their choosing. If needed, they would be provided with access to programs such as Stata, SAS, R, NVivo, Atlas.ti, StatTransfer, EndNote, ArcGIS, or JoinPoint. They will complete an employee onboarding that will introduce them to various other tools and resources available to DOH staff. They will also have access to a Public Health Digital Library to allow them to download any scientific literature needed to support their work.

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Data for analytic projects will be made available depending on the final projects the fellow settles on with their supervisors. This could include line-level data for datasets such as BRFSS, Healthy Youth Survey, PRAMS, birth and death data, birth defects surveillance, home visiting, hospital discharge, health outcomes and clinical datasets, syndromic surveillance, environmental health, COVID-19, and others.

Projects

Surveillance Activity Title: Establishing Surveillance Best Practices for Socioeconomic Status and Examining Mental Health Outcomes among Adolescent Washingtonians

Surveillance Activity Description:

Adolescent health is often assessed through clinical records alone. However, traditional clinical records generally fail to capture social determinants of health. These are most commonly assessed on surveys, making population-wide surveys, such as Washington’s Healthy Youth Survey (HYS), a critical surveillance system for 12-18-year-olds. The fellow will use numerous methods for assessing socioeconomic status (SES) among youth, and they will design and implement an analytic plan to explore the relationship between SES and mental health outcomes. They will specifically focus on identifying differences across subgroups of youth and will work with internal programs to ensure the analysis plan supports program, policy, and evaluation needs. The fellow will also provide guidance to the HYS planning committee regarding the utility and reliability of these SES indicators to inform future survey planning.

Surveillance Activity Objectives:

Objectives:

- Gain familiarity with surveillance of SES and mental health outcomes among youth in WA
- Explore the relationship between SES and mental health outcomes among WA youth
- Support improved surveillance in these areas for WA

Deliverables:

- Develop a report on current surveillance methods for SES, including comparison of different methods and design recommendations for SES surveillance best practices for the HYS age group and cautions
- Develop and implement an analytic plan to identify health inequities related to the intersection of SES and mental health among youth

Surveillance Activity Impact:

As a key driver of health, SES receives remarkably little attention in the public health practice sphere. Yet, the literature is clear that adverse experiences in childhood, such as exposure to housing and food insecurity, can contribute to poor health outcomes later in life. Growing literature shows that the impacts of ACEs can also arise sooner, like in the mental health of adolescents. Through this project, the fellow will help to ensure effective surveillance of SES among Washington youth that will inform a broad range of programs, policies, and initiatives designed to improve adolescent health now and support health and wellbeing into the future.

Surveillance System Evaluation Title: Law Enforcement and Criminal Legal System Epidemiology

Surveillance System Evaluation Description:

Surveillance of law enforcement involved injuries and fatal encounters (LEIFE) was recognized as a priority by CSTE in 2022 and is an area of statewide interest in Washington. WA DOH is piloting a new surveillance process to track these encounters and related outcomes in partnership with CSTE and several other jurisdictions across the country. The fellow will join the WA DOH Steering Committee for this work and take on a primary role in all stages of the surveillance process. They will have the chance to learn about diverse data systems, data linkage, case definition application, data cleaning, data translation and presentation, communications, and external cross-disciplinary partnership. In particular,

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we anticipate the fellow will play a leading role in the pilot efforts to expand to non-fatal encounters and in building collaborations with Tribal partners. The fellow will be asked to lead the surveillance system evaluation of the new LEIFE surveillance process in WA, which will have a critical impact on if this work is supported going forward.

Surveillance System Objectives:

Objectives:

- Explore current methods in LEIFE epidemiology
- Build familiarity with LEIFE related data systems, both internal and external
- Contribute to agency expansion of LEIFE surveillance
- Conduct a surveillance system evaluation of fatal, non-fatal, or both forms of LEIFE to determine if ongoing implementation of the new methodology is worthwhile for WA DOH to continue

Deliverables

- Contributions to the LEIFE Surveillance Steering Committee at WA DOH
- Analysis and report of relevant and available data to be shared internally
- Conduct a surveillance system evaluation, including the standard components of such an evaluation, of either fatal, non-fatal, or both aspects of the news system
- Develop a conference abstract and/or a peer-reviewed manuscript
- Support presentations and reporting to external partners, including the Governor's Office

Surveillance System Impact:

Law enforcement epidemiology was identified as a CSTE Presidential Priority in 2021, though intentional surveillance of law enforcement encounters within public health remains relatively rare, despite the 2022 adoption of a new CSTE Position Statement on this subject. The fellow's contributions will help support Washington's expanded efforts to address the health inequities related to differential policing and the criminal legal system and its participation in a national workgroup hosted by CSTE. Their contributions will also inform current and new interdisciplinary partnerships between DOH, state agency partners, local organizations, and law enforcement, all directed toward reducing the adverse health effects associated with negative exposure to law enforcement and criminal legal system involvement.

Major Project Title: Population Survey Surveillance and Modernization

Major Project Description:

The fellow will be co-housed with the Population Survey Team and will have the chance to contribute to the operation of multiple population surveys that collect information on the wellbeing of Washingtonians throughout the life-course. The fellow will spend a portion of time with each team throughout their fellowship years, learning about different kinds [P(17.1)][MS17.2]of survey administration cycles and playing key roles in their operations. They may support revising new questions, data cleaning and analysis, automating formerly manual methods, conducting sensitivity analyses or evaluations of processes, or implementing methodologic modernizations. Throughout their time with these teams, the fellow will work with team members to identify opportunities for cross-survey standardization, life course analysis and reporting, Tribal data sovereignty expansion, and more. In time, the fellow may be asked to take on their own consultation projects with other teams throughout the agency who are seeking methodologic expertise to support their own survey needs. This project will be limited only by the fellow's creativity!

Major Project Objectives:

Objectives:

- Develop understanding of the use of population surveys in public health practice
- Contribute to the implementation of population surveys
- Participate in epidemiologic methods discussions and problem solving

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- Identify projects and innovations that can advance the team's efforts

Deliverables:

- Contributions to overall survey administration
- Present themes and findings to the broader team at bi-weekly team meetings, as appropriate
- Propose a life course analytic project or a methodologic evaluation and conduct the project, to be submitted either as a conference abstract or manuscript

Major Project Impact:

Population Surveys are a critical tool for public health, academic, and government agencies across the state of Washington to understand the health and wellbeing of the population. The fellow's contributions will be part of this foundational public health work and will allow them the chance to learn translatable skills that can be applied in future work on other statewide or broad population surveys. The epidemiologic experience they bring to the Population Survey Team will bolster efforts to further advance methodologic processes while providing additional epidemiologic capacity that is greatly needed at all stages.

Additional Project #1 Title: Emergency Notifications for Tribal Nations

Project #1 Type: Major Project

Project #1 Description:

Tribal Nations are part of the governmental public health system of Washington state. Similar to local health jurisdictions, Tribal Nations need to be informed about traveler monitoring, outbreaks, cluster investigations, and emerging infections. DOH would like to improve upon our current process for notification of Tribes when these emergency situations arise. To improve upon our established procedure for Tribal-related notifications, the fellow will work with the State Epidemiologists (Communicable Disease and Policy and Practice) to learn about current procedures for Tribes and local health jurisdictions, collaborate with the Tribal Engagement Director in the Office of Tribal Public Health and Relations, the Office of Emergency Preparedness and Response, and the Tribal Foundational Public Health System Workgroup, and host a formal Tribal consultation to improve coordination and ensure our current procedure is appropriate for Tribal needs.

Project #1 Objectives and Expected Deliverables:

Objectives:

- Evaluate the current emergency notification system for Tribes.
- Plan a formal Tribal consultation to improve upon a Tribe-specific procedure for emergency notification.
- Finalize a procedure for notification of Tribes.

Deliverables:

- Present on the refined procedure at Tribal public health meetings include the Northwest Portland Area Indian Health Board meeting, the American Indian Health Commission meeting, and the Tribal Foundational Public Health Services workgroup.
- Establish Tribal points of contacts for notifications and obtain necessary confidentiality agreements from the points of contact.
- Develop a final report for regional distribution and to support ongoing procedure implementation.

Project #1 Impact:

The WA Department of Health has called out honoring Tribal data sovereignty as a key priority. By providing Tribes with the information, Tribes need to effectively respond in emergencies we are helping to uphold the Tribal data sovereignty principle of Tribes controlling their own data and its application. Collaboration between the State, Tribal Nations, and Local Health Jurisdictions is key for a coordinated response to emergencies. By ensuring DOH has procedures and points of contact in place to reach out to Tribes to notify them in emergencies, the fellow will support more timely

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communication and culturally appropriate response to these emergent situations. Tribal Nations were leaders in the COVID-19 response in Washington state; in working together on a more coordinated response we may also seek Tribe's guidance on responding to emergencies

Additional Project #2 Title: Informatics and Partner Data Exchange

Project #2 Type: Other

Project #2 Description:

In public health, informatics refers to the practice of using data, technology, and information systems to support decision making, which is essential for modern epidemiology because it enables faster detection, analysis, and response to health threats. Two key standards in this space are HL7, a long standing framework that defines how health information is structured and shared, and FHIR, a newer HL7 standard that uses modern web technologies to make health data exchange faster, more flexible, and easier to implement. With this foundation, the Department of Health is now expanding its FHIR capacity and is conducting pilot projects to help expand further. The fellow would have the chance to support this exciting rollout and develop their own use cases/proofs of concept. The topic areas are broad and could follow a fellow's interests! Some examples include:

- Vital Records Modernization: Expanding FHIR based exchange of death records statewide, including bi directional data sharing with hospitals and medical examiners.
- Emergency Preparedness Data Automation: Using FHIR (SAFR IG) to automate hospital capacity and emergency readiness reporting currently entered manually into WA Health.
- Clinical Data Access for Public Health Programs: Leveraging TECCA and FHIR queries to simplify retrieval of case information for programs such as newborn screening follow up and RESP NET.
- Innovative Public Health Data Applications: Advancing FHIR enabled projects for chronic disease surveillance and public facing patient summaries through the Health Data Utility and related initiatives.
- Immunization Data Exchange for Outbreak Response: Piloting bulk FHIR based immunization record exchange with local health jurisdictions to support vaccine preventable disease investigations.

Project #2 Objectives and Expected Deliverables:

Objectives:

- Help coordinate and design modern FHIR data exchanges for public health
- Improve interoperability and timeliness of data exchanges
- Evaluate the ROI and benefits of such modernized exchanges in terms of time saved and improved performance

Deliverables:

- Help map FHIR resources to DOH systems for data transformations
- Participate in FHIR pilots
- Report out on outcomes and improvements as well as areas for additional improvement
- Present findings to partners

Project #2 Impact:

Many important exchanges of data between public health and providers and within the public health ecosystem (STLT and Federal) rely on manual, non-standardized exchanges that are time consuming and do not allow public health, or our partners, to be response ready and able to prevent vs. react to outbreaks and other public health issues. FHIR provides an opportunity to automate and streamline work to improve efficiency and effectiveness of our work in areas such as: predicting hospital capacity, understanding disease trends and preventing outbreaks, and in exchanging critical information during an outbreak such as vaccination status.

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Additional Project #3 Title: Child Wellness Survey Data Translation for Policy and Program Recommendations

Project #3 Type: Surveillance Activity

Project #3 Description:

The Child Wellness Survey (CWS) was a representative survey for families with children aged 6 months to 5 years across Washington state that was run in 2024-2025. It was one of four population surveys led by WA Department of Health and explored how families are doing by asking about the health and development of their child, access to childcare, and other topics. The CWS data brings a unique perspective from the parents or guardians of 0-5 year olds in Washington State, but unfortunately lost state funding and has been sunset after only one year. While there may be administrative data that reveal the landscape of childcare in WA, CWS data has elevated the voices of young families. However, agency capacity to use these data to their full effect is limited, making this an open sandbox for a fellow to explore. The fellow will have the chance to design at least one analysis that will help inform policy and program recommendations. They will have technical mentorship and support, but they also will have the independence to identify topics that both interest them and that they believe will have the biggest impact on public health.

Project #3 Objectives and Expected Deliverables:

Objectives:

- Review and understand CWS methods, weighting and topics on the 2024-2025 survey.
- Conduct background review/literature review on topics of interest to identify key areas to explore more deeply
- Convene key internal and external partners to support development of an analytic priorities

Deliverables: For this project, the CSTE fellow will:

- Perform descriptive analyses to understand and explore the CWS data
- Perform various statistical analyses to report the landscape of childcare access statewide and with a specific emphasis on potential inequities
- Develop a conference abstract or present at a state Epidemiology Lunch and Learn session on the findings
- Produce a report with practical recommendations for internal and external sharing

Project #3 Impact:

Lack of affordable childcare, health care access, food insecurity, and other barriers are commonly reported among families across the nation, including WA state. Through this project, the fellow will help bring the voices of young Washington families forward and highlight opportunities for policy and programmatic interventions with long-lasting public health impacts. Findings from this project will ultimately be used to improve future potential iterations of the CWS questions as well as help guide our agency and our partners toward evidence-based decisions to support the youngest residents of our state.

Additional Project #4 Title: Guidance on Data Linkage Project and Race/Ethnicity Data Quality Improvements

Project #4 Type: Major Project

Project #4 Description:

DOH has been working for over ten years now with the Northwest Tribal Epidemiology Center on utilizing Indian Health Services data through data linkages to improve our data quality on American Indian/Alaska Natives. However, while some data systems have incorporated this data, they do not do it uniformly and other systems have not yet begun. After conducting a thorough review of existing processes and systems, the fellow would be responsible for developing new standards and best practice guidance on the integration of enhanced race/ethnicity data, coordinating with data stewards, Tribal public health leaders, and the Northwest Tribal Epidemiology Center.

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Project #4 Objectives and Expected Deliverables:

Objectives:

- Evaluate the current methods of the different data systems for incorporating linked data.
- Create guidance documents on how data stewards and their teams should incorporate the linked data into their data systems.

Deliverables:

- Submit an abstract to a conference on impact of linkage work on improvement in the quality of race/ethnicity data across DOH data systems.

Project #4 Impact:

The data quality of race/ethnicity data is key to addressing health disparities. The race category of American Indian/Alaska Natives is generally considered of poor quality due to underreporting, misclassification, and other data collection issues. Therefore, using more than one source to determine the racial categorization of American Indian/Alaska Native can improve the data quality and help to better identify health disparities. Standardizing how this linkage work is integrated into DOH data systems will help other data systems who are interested in this improvement and help DOH to understand how the linked data has improved the data quality of their data systems overall.

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

We will explore with the fellow the current landscape of emergent health events of interest statewide so that we can identify an area where they can meaningfully contribute and not simply plug into a role that does not interest them. Here are some possible ways a fellow might achieve this required competency in preparedness and response, but this is by no means an exhaustive list. The Division of Emergency Preparedness, Resilience, and Recovery is quite active during summer fire season and the fellow could be involved in the agency's Incident Management Team supporting that response effort or in other activities that arise throughout the year in the wake of emergent disasters (e.g., chemical spills, natural disasters). The Division of Community Health Services also houses communicable disease and infectious disease programs, both with regular events requiring emergency response activities. This Division is collocated with CEPEA and engaging the fellow in these activities would also be an option. If the fellow has interest, there could also be an opportunity for them to support immunization strategic planning and distribution efforts within the Division of Prevention and Community Health. Time allocated to these activities will depend on the fellow's interest and agency need, while ensuring that the bulk of the fellow's time is spent addressing the rest of their required competencies.

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

The fellow would be invited to participate in a cluster and/or outbreak investigation during their fellowship. Should an interesting non-infectious disease cluster be identified, the fellow would likely work directly with the State Epidemiologist to conduct the investigation, develop messaging, and produce relevant materials for distribution. However, as these tend to be rarer, there are also ample opportunities for the fellow to participate in communicable disease outbreaks, including COVID-19 in non-healthcare congregate setting (e.g., fishing vessels, sports tournaments), foodborne outbreaks (both local and national), and zoonotic disease outbreaks. Depending on what is happening during the fellow's two years with the agency, we will be keeping an eye out for interesting learning opportunities and will encourage the fellow to try working on things outside of their wheelhouse.