

**ID: 45589948**

**Infectious Diseases - Host Site Description**

**New Jersey Department of Health**

**Assignment Location:** Trenton, US-NJ  
New Jersey Department of Health  
Epidemiologic Services Division

**Primary Mentor:** Anindita Fahad, MPH, MA  
Director - Epidemiologic Services Unit  
New Jersey Department of Health

**Secondary Mentor:** Greta Anschuetz, MPH  
Acting Assistant Commissioner and STD Director  
New Jersey Department of Health

**Work Environment**

Hybrid

**Assignment Description**

The Department's priority is improving population health by strengthening New Jersey's public health system. The Department's five branches, Public Health Services (of which HIV, STD and TB Services reports to), Health Systems, Integrated Health, Office of Population Health and the Office of Policy and Strategic Planning work collaboratively toward that goal. Population health focuses on keeping healthy New Jerseyans well, preventing those at risk from getting sick, and keeping those with chronic conditions from getting sicker. Population health promotes prevention, wellness and equity in all environments, resulting in a healthy New Jersey. HIV, Sexually Transmitted Diseases and Tuberculosis Services focuses on preventing and reducing the spread of HIV, STDs and TB and ensure that HIV-, STD- and TB-infected people and those at risk of infection have access to the care they need. The program uses its resources to help community-based facilities deliver high-quality, comprehensive services that meet the language and cultural needs of the people they serve.

The Epidemiologic Services Unit has several data use agreements with Rutgers University for collaboration on analysis of data collected by the Surveillance grants and for data matches with other registries. We are engaged in developing data use agreements with neighboring jurisdictions to increase the efficiency of investigating and responding to emerging threats such as PWID and anonymous sex-fed clusters and outbreaks.

The Fellow will report to the Director for the HIV Surveillance Program. The Fellow would analyze the existing data, develop the criteria for which cases should have follow-up and evaluate the implementation of the intervention by following up with and getting reports from field investigators. The Fellow will become proficient in SAS (if not already so) by learning how to merge multiple datasets that have no unique identifier, building evaluation metrics, and provide recommendations to the Director and leadership of the Division. This Fellow will have numerous leadership and collaboration opportunities with the numerous areas within the Department of HIV, STD, and TB Services (DHSTS) to help our model intervention/program move forward. DHSTS works closely with the Communicable Disease Service providing numerous opportunities to participate in infectious disease surveillance. DHSTS employs approximately 150 people to conduct disease surveillance for HIV, STD and TB as well as prevention for these three program areas.

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

New Jersey Department of Health (NJDOH) will provide a SAS licenses to the Fellow. Access to Tableau and ArcGIS will be provided if needed. In addition, other software programs - such as Power BI - will be made available upon request. The

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Fellow will use Enhanced HIV/AIDS Reporting System (eHARS), a web-based application for HIV/AIDS surveillance and data management. The CDC Enhanced HIV/AIDS Reporting System (eHARS) is a browser-based, CDC-developed application that assists health departments with reporting, data management, analysis, and transfer of data to CDC. eHARS encompasses core HIV/AIDS surveillance data activities and projects and provides tools to assist in the following: investigation of potential HIV/AIDS cases, management of current data, import and export of data transfer of data to CDC reporting analysis. Positive laboratory reports of HIV are entered into eHARS either by electronic laboratory reporting (ELR) transmissions or are entered manually on a daily basis from clinical laboratories and acute care hospitals. Follow up information is added by trained users in various epidemiologic public health roles. The eHARS is available 24 hours a day, 7 days a week and monthly transmissions to the Centers for Disease Control and Prevention (CDC) support national as well as statewide surveillance. In addition, the Fellow will have access to CDRSS, New Jersey's electronic, web-enabled system where public health partners statewide can instantly report and track incidences of communicable diseases. The Communicable Disease Reporting and Surveillance System (CDRSS) facilitates the timely reporting and immediate sharing of pertinent data, thus supporting appropriate public health responses, be they isolated incidences or multi-state outbreaks. As far as possible, access will also be granted to CAREWare, New Jersey Health Information System (NJHIN) and any other databases and registries that will be needed for the direct work of the Fellow.

**Projects**

**Surveillance Activity Title: Managing data completeness in eHARS for early and acute cases of new HIV diagnosis**

*Surveillance Activity Description:*

New Jersey's HIV surveillance program would like to undertake a project to identify persons with early and acute HIV diagnosis in eHARS or in another database. Many of the cases currently being ascertained in NJ do not have the evidence to provide the Stage 0 at diagnosis or acute case definition. Part of the reason is the recently lapsed state rules that did not make all levels of CD4 and Viral Load tests reportable to the state. Since the rules have just been recently recodified, this provides a great opportunity for the Fellow to monitor if the lab tests being prescribed and shared with the Health Department meet the mandate of the new rules. It also provides an assessment of need gaps in reporting as well as in capturing the required information to ascertain early and acute cases that need an ART prescription and linkage to other social resources to prevent clusters and outbreaks.

The Fellow will engage in a project to identify cases within 30 days of diagnosis that need the preliminary information necessary to achieve this categorization. The Fellow will engage in steps to remove results known to be false positives and in removing false negative results known to be due to data-entry errors or sample-handling errors.

*Surveillance Activity Objectives:*

The Fellow will develop lists that have a combination of discordant (positive and negative/indeterminate) HIV test results near the time of diagnosis which is an indicator of the earliness of the infection for investigation by case investigators. The Fellow will also develop bi-monthly lists of persons who have high viral load levels at initial diagnosis so these can be contacted by linkage to care navigators to initiate into care. Finally, the Fellow will work with the partner services, counseling and testing sites and other providers to develop training on collection of data on last negative test results for HIV through self-tests or lab tests, as well as reporting cases with a history of signs/symptoms consistent with acute retroviral syndrome or a very high viral load. The Fellow will promote the training to these partners.

*Surveillance Activity Impact:*

Identification of early and acute cases of HIV is critical to preventing rapid transmission by rapidly linking newly diagnosed individuals to care and initiating them to ART. This surveillance activity is necessary to meet the Ending the Epidemic goals of the state as well as to prevent HIV clusters and outbreaks.

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**Surveillance System Evaluation Title: Increase to meet benchmark for previous negative test result in eHARS, necessary to provide Stage 0 information on newly diagnosed HIV cases.**

*Surveillance System Evaluation Description:*

The Fellow will be directly involved in ensuring that New Jersey (NJ) is able to meet the requisite data benchmarks for previous negative test result in eHARS, necessary to provide Stage 0 information on most newly diagnosed HIV cases. Further, the Fellow will analyze what proportion of cases have a diagnosis of HIV infection based on a testing algorithm designed to find a combination of positive and negative/indeterminate results diagnostic of acute infection.

*Surveillance System Objectives:*

Approximately 42% of New Jersey cases have a known value for previous negative HIV test (Target $\geq$ 70%). Approximately 34% newly diagnosed cases with a previous negative HIV test have a complete date of documented negative test result (Target $\geq$ 50%). The proportion of cases with sufficient information to determine Stage 0 and Acute categorization will be ascertained and all efforts will be made to improve these through a series of planned steps.

*Surveillance System Impact:*

The above mentioned strategies would enable the Division to prioritize follow-up investigation for persons with stage 0 or acute infections so that rapid and recent transmissions can be addressed efficiently.

**Major Project Title: Identifying, investigating and reporting early and acute HIV cases so as to link them to anti-retroviral treatment within 90 days of transmission**

*Major Project Description:*

The project will seek to identify persons with discordant screening results and newly diagnosed persons who have a high risk for transmission of HIV defined by sexual behavior characteristics including average number of partners per year, frequency of sex acts, proportion of acts protected by condoms and who do not have adequate testing history or information required to categorize them as acute/early infection. These individuals will be followed up to get additional testing by P24 and/or HIV RNA/DNA tests so an acute definition might be obtained for these cases. They will then be rapidly linked to care and offered ART initiation.

*Major Project Objectives:*

The project objective is to develop a successful and cost effective intervention strategy to intervene with individuals who have acute infection and likely are not aware of their ability to transmit HIV is very high. Expected deliverable is a bi-monthly list of risk stratified newly diagnosed individuals who will receive follow up visits by DIS for rapid linkage to additional HIV RNA/DNA tests to obtain the acuteness of their infection.

*Major Project Impact:*

This strategy to conduct additional and early testing on persons with high transmission ability will be considered as part of a comprehensive HIV prevention strategy of identifying acute infections, decreasing transmissibility and increasing linkage to care. With scalability, the intervention could prevent HIV outbreaks in the state and provide real gains in the goals defined by National HIV and AIDS Strategy and Ending the Epidemic.

**Additional Project #1 Title: Analyze cluster data to examine factors which are associated with rapidly growing clusters in New Jersey**

**Project #1 Type: Major Project**

*Project #1 Description:*

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Cluster and outbreak response involves understanding the networks in which rapid transmission is occurring. The Fellow will be expected to conduct literature review and best practices to develop sound hypotheses on factors likely associated with growth in clusters, including sentinel HIV cases (i.e., early-stage or acute infection or molecular cluster cases). Further, the Fellow will perform statistical tests on developed hypotheses to identify significant factors.

*Project #1 Objectives and Expected Deliverables:*

Statistical tests of significance on factors associated with large clusters and clusters that have evidence of rapid transmission and growth.

*Project #1 Impact:*

The identification of factors connected with rapid growth of clusters will enable the Division to develop interventions to address these and prevent outbreaks.

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

The Fellow will develop risk communication templates on potential HIV clusters and outbreaks. These include assisting in developing content for health alerts to local public health departments, as well as descriptive analyses of cluster/outbreak characteristics. This will require 5% of the Fellow’s time allocation.

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

The Fellow will develop specific standard operating procedures on outbreak response for clusters/outbreaks. This will include operating procedures for the following:

- Mapping the community testing and health care delivery and referral system
- Identifying partners and stakeholders for response mode and method
- Developing local teams
- Roles and responsibilities of team members
- Setting up incident command centers
- Identifying special populations in the community that might need additional outreach and engagement

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

The Fellow will match data collected during New Jersey’s COVID response to the HIV Registry (eHARS) to develop descriptive data analyses such as:

- Count of persons living with HIV (PLWH) with a diagnosis of COVID-19 by age group, gender, race/ethnicity, transmission category, county of residence/zip code
- Counts of persons living with HIV (PLWH) who have a COVID-19 diagnosis on a claim or encounter record for any healthcare setting using the Uniform Billing Health Data, by age, race, ethnicity, Medicare/ADAP status
- Percent of COVID-19 hospitalizations by length of stay among PLWH
- Count of persons living with HIV (PLWH) who received primary series of COVID vaccine by age group, gender, race/ethnicity, transmission category, county of residence/zip code
- Count of persons living with HIV (PLWH) who received a booster dose of the vaccine by age group, gender, race/ethnicity, transmission category, county of residence/zip code
- Proportion of virally unsuppressed PLWH that are unvaccinated or have only received 1 dose

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

Nationally, the burden of HIV is faced disproportionately by race/ethnic minorities and by women. The program has geocoded data linked to American Consumer Survey and would like to put these data to analyses and data visualization. The Fellow would be provided with all opportunities to work on these projects.