## Assignment Description

The Fellow will be mentored by the Branch Lead for Congregate Living settings and a member of the Healthcare Monitoring Team. The Fellow will be engaged with COVID response projects in congregate care (LTCF), Congregate Living (Homeless shelters, Corrections) and COVID hospital and death surveillance projects.

Daily activities led by the Fellow will include working with SMEs to investigate, review and report medical records from deaths, hospitalizations, and pregnant women with laboratory confirmed COVID-19 infections. Additionally, the Fellow will work to enhance and maintain data systems for the monitoring and reporting of COVID cases and outbreaks in congregate living settings. The Fellow will participate in the creation of health education materials, guidance documents or job aides and will work to promote collaborative efforts to share prevention at conferences, local or regional meetings or disseminated directly to targeted audiences.

In addition to these broader goals, the Fellow will lead or participate in specific analytic projects on COVID-19 in high risk settings or among high risk groups with a focus on equity and describing disparities. A proposed primary project is the analysis of COVID-19 electronic laboratory data in the context of available census tract data to describe spatial and temporal differences between the tested population and area demographics. This analysis will allow MDH to evaluate testing of vulnerable populations and re focus testing priorities as needed. The Fellow will be connected with leads in long term care, case and outbreak investigation, and congregate living and will participate in projects in each of these areas. It is anticipated that the Fellow will develop or refine skills in epidemiologic study design, analysis, and medical record review in this assignment.

## Day-to-Day Activities

The Fellow will attend daily internal and external meetings, including those for all infectious disease staff. The Fellow will contribute to development of REDCap or Minnesota Electronic Disease Surveillance System work flows and documentation and will participate in the development of variables, modules or reports for COVID-19 special projects. The Fellow will attend meetings with IT, MEDSS User groups and other IDEPC staff to facilitate this work. Routine daily work will also include reviewing medical records, reviewing surveillance data, troubleshooting SAS code, and using multiple databases to extract relevant information for projects.
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<td><strong>Surveillance Activity</strong></td>
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The Fellow will work with the Unexplained Deaths program to enhance COVID-19 death surveillance. The Fellow will perform death record searches to identify possible COVID-19 deaths or respond to reports of unexplained deaths from clinicians or medical examiners. The Fellow will collect relevant patient information including medical history, and coordinate sample collection and submission for testing at MDH laboratory.

| **Surveillance Evaluation** | Evaluating of completeness of housing status variable among cases of COVID-19 |

To date MDH has identified 54 confirmed cases of COVID in persons experiencing homelessness among the more than 13,000 cases statewide. Persons experiencing homelessness (PEH) have barriers to accessing care and may be less likely to be tested. However, even when tested, PEH are less likely to be reached for interview and subsequently may not be counted as homeless in surveillance data. The Fellow will use electronic laboratory reports to identify patients with addresses that link to known homeless shelters, hotels where shelters have been decompressed, or will use other indicators of possible homelessness in the address field (General Delivery, PO Box, etc) to identify COVID patients who are experiencing homelessness. This evaluation will help describe the true burden of COVID among those experiencing homelessness while developing methods to enhance identification of cases moving forward.

| **Major Project** | Evaluate COVID-19 Testing of Vulnerable or Underserved Populations |

The Fellow will work closely with the COVID Data Management team to link COVID-19 electronic laboratory patient data with census data to perform a spatiotemporal evaluation of testing coverage among vulnerable or underserved populations. This evaluation will help to identify communities where additional access to resources such as testing, PPE, education and support to implement recommended mitigation strategies is needed.

| **Additional Projects** | An Analysis of Factors Associated with Prevention of Congenital Syphilis |

**Project Description**

Over the last five years Minnesota has experienced a concerning increase in the number of early syphilis cases among females of reproductive age. There has been a concomitant increase in reported congenital syphilis cases, particularly from 2017 - 2019. This is a critical moment to focus efforts on congenital syphilis elimination in Minnesota. To this end the Minnesota Department of Health has initiated a congenital syphilis morbidity and mortality case review panel to identify and understand the patterns of missed opportunities among cases of congenital syphilis and to inform systems-level interventions in community provider practices, support services, and/or public health response that could prevent future cases of congenital syphilis.
As an expansion of this review process, the CSTE Fellow will be tasked with reviewing congenital syphilis cases averted due to timely and appropriate treatment of pregnant women with syphilis. The Fellow will identify appropriately treated pregnant women from routine surveillance data and through enhanced methods (birth certificate matching to identify pregnancy where incomplete in surveillance data) and will review prenatal care, case investigation records, and birth records for the mothers and infants. Using the congenital syphilis prevention cascade as a framework, key variables (e.g. number of prenatal visits, syphilis screening, syphilis stage, treatment, demographics, health system, co-morbidities) will be compared between mothers of averted cases and mothers of congenital syphilis cases. Meaningful differences will be used to inform congenital syphilis elimination efforts.

**Preparedness Role**

The Fellow will coordinate or participate in various groups involved in planning and distribution of pharmaceutical interventions for COVID-19 (vaccines and other pharmaceuticals) as they become available. Additionally, the Fellow may participate in mass vaccination event planning or development of educational materials.

**Additional Activities**

The Fellow may participate in a number of ongoing COVID-19 projects including a descriptive project on COVID-19 in pregnancy, an analysis of exposure events across different healthcare setting types over time, and the development of infection prevention and control trainings or job aides.

**Mentors**

| Primary | Jennifer Zipprich, PhD, MPhil, MS  
|         | Epidemiology Supervisor |
| Secondary | Gina Liverseed, DNP, MS, BS  
|          | HIV Nurse Specialist |