**Assignment Description**

The focus of this assignment will be to increase the capacity of DOH-Seminole to respond to opioid-related public health issues and other new challenges in disease control and prevention. The Epidemiology Program monitors reportable diseases and outbreaks and conducts statistical assessments of the community for the purpose of identifying areas of need for chronic diseases in order to improve health equity. Epidemiology Program activities include conducting active and passive surveillance to detect diseases and adverse health conditions, investigating reports of acute diseases and outbreaks, recommending appropriate prevention measures, treatment, and control; monitoring and investigating reports of unusual health conditions, conducting data analyses and disseminating publications, providing guidance for healthcare professionals, facilities, and other agencies and organizations regarding disease prevention and control; and responding to disease-related inquiries from residents, healthcare providers, and others. The Epidemiology Program also houses the Hepatitis Program, which provides hepatitis testing, vaccination, counseling, and community education to the at-risk and infected population free of charge. Seminole county and Central Florida have been responding to a hepatitis A outbreak since July 2018. The Fellow will assist the Epidemiology program to analyze and present data summary of all cases investigated and reported to date. Seminole county Sheriff’s Office is leading the state Opioid Council. DOH-Seminole has been working closely with the Council and our Health Officer is the Medical Committee Chair. The Epidemiology staff analyzes all available data sources and prepares the reports for every monthly meeting. The Fellow will take the lead on this initiative and act as a liaison between the health department and all other agencies working in our local response. The Epidemiology Program is staffed by an Epidemiology Manager, 3 epidemiologists and a health educator. The Tuberculosis and Refugee Health Programs are also under the supervision of the Epidemiology Manager. The Fellow will have a partitioned office space with their own computer and office supplies. All Program staff will be available to train and provide support.

**Day-to-Day Activities**

Participate in reportable disease case investigations. The Fellow will be responsible for receiving case reports, interviewing patients/proxies regarding exposures, identifying ill/susceptible contacts, providing education and recommendations for disease control, entering all data into the surveillance database and communicating relevant findings to the mentor. Investigate cases within the required timeline per FDOH guidance. Fellow will shadow epidemiology mentor until disease specific disease competency checklists are completed. All competency checklists should be completed within the initial year of the fellowship.

Assist in outbreak investigations. Participate in the analysis of risk factors. Responsibilities will include interviewing of cases and controls, collecting and entering line list data, performing field investigations
to identify risk factors, specimen/sample collection, and providing outbreak control and prevention guidance. A final report containing key elements and completed by the Fellow within 30 days from the last date of the outbreak investigation is required for all food and waterborne outbreaks and optional pending workload for all other outbreaks. Outbreak competency check lists will be completed with the initial year of the fellowship start date.

Assist with quarterly surveillance newsletter. The Fellow will assist the epidemiology mentor with compiling data for the surveillance newsletter. The Fellow will expand newsletter distribution to focus area contacts, including school board nurses, school health aids, childcare providers, etc. The Fellow will be responsible for contributing original written reports on chronic and infectious disease trends or cases of interest including data analysis to the newsletter. The Fellow will keep abreast of latest recommendations and guidance (e.g. CDC HANS, MMWR’s) pertinent to the medical/healthcare community for distribution with the newsletter. Assist with editing and proofreading of the newsletter and updating the distribution list.

Investigate, collect, analyze and conduct epidemiological projects related to prevention of fatal and non-fatal unintentional overdose injuries, and related public health problems, in compliance with established procedures governing epidemiologic work with a focus on Seminole and Central Florida level of analysis. Develop appropriate research tools and research methodology (e.g., conducts literature reviews, determines sampling techniques, designs assessment instruments and surveys; develops and implements research projects); conduct data analysis and other overdose-related data products (e.g., factsheets, presentations, publications, briefs). Write and/or edit reports and recommendations from analysis of data; prepare graphic presentations of data for inclusion in reports or for display.

Participate in regular staff meetings and trainings and attend meetings with community partners such as the school health advisory council, early learning coalition, local hospital infection preventionists, infectious disease clinicians, EMS and county government agencies. The Fellow will also be encouraged to attend additional meetings and training opportunities related to public health as they become available.

Potential Projects

**Surveillance Activity**  
**MDRO Surveillance & Response in Long Term Care Facilities/Nursing Homes**

Cases of novel multi-drug resistant organisms (MDRO’s) have been identified in Seminole County as well as the Central Florida region. Long-term care facilities have been identified as having deficiencies in carrying over infection control recommendations when MDRO patients are transferred in. The fellow will work to identify and evaluate gaps in existing infection control practices in long term care facilities and nursing homes in Seminole County related to MDRO’s. Facilities will be recruited from the list of long term care facilities and nursing homes that are located within Seminole County with emphasis on facilities with which MDRO patients have been known to reside. The results will be aggregated and used to identify best practices, common opportunities for improvement, and to develop further trainings and evaluation activities.
Project deliverables include:

- Evaluation of facilities with CDC ICAR and/or customized survey tools
- Analysis of evaluation findings
- Development of training programs to address commonly identified opportunities for improvement

**Surveillance Evaluation**

**Animal Bite Identification in ESSENCE Syndromic Surveillance vs. Passive Reporting**

Rabies Post Exposure Prophylaxis cases have increased significantly in Seminole County in the last 3 years, going from 25 cases in 2015, to 43 cases in 2016, and 71 cases in 2017. Each case is investigated in collaboration with Seminole County Animal Services, however cases are often identified either through ESSENCE syndromic surveillance system queries or self-report that were not reported by a medical provider or in which PEP was unnecessarily provided. The fellow will evaluate passive vs. active syndromic surveillance system surveillance for identification of animal bite victims requiring PEP. The primary goal of the project is to improve consistency of animal bite reports from local hospitals and urgent care facilities, evaluate gaps in knowledge of rabies and high risk animals in residents of the identified high risk areas, and development of interventions to address identified issues and areas of need.

Project deliverables include:

- Conduct trainings with urgent care and hospital ED staff regarding animal bite reporting, low/high-risk animals and rabies post-exposure prophylaxis.
- Improve animal bite and rabies awareness in the targeted communities and improve hospital and urgent care reporting of animal bites by addressing the identified gaps and areas of need via printed materials and other media marketing campaigns.
- Submit a written report to the Florida Epi Update or other peer-reviewed journal and participate in a conference via oral or poster presentation.
- GIS mapping of bite reports exported from the Seminole County Animal Services database Chameleon to identify high-risk areas in Seminole County.
- Create and conduct a survey of animal bite victims in the identified high-risk areas on knowledge of rabies, high risk versus low risk animals and animal bite reporting.

**Major Project**

**Opioid Surveillance Data Integration**

Current data exists to monitor the burden of disease related to the opioid epidemic, including but not limited to: overdose death data; hospital overdose data; narcan administration data; and communicable disease data. Barriers related to sharing of data need to be reduced/eliminated for better monitoring and response to the opioid crisis. Research is an essential public health service and there is a need for continued research to identify innovative solutions to the opioid epidemic. The Fellow will collaborate with academic and research institutions to further evidence-based strategies to address the epidemic. DOH-Seminole Epidemiology program will analyze available data to address the increased burden of communicable disease related to the opioid epidemic and ongoing sustainable funding.
Communicable diseases such as hepatitis C and HIV can be directly related to injection drug use and the sharing of needles. DOH-Seminole has also seen a rise in communicable disease rates related to risky behaviors that can coincide with addiction such as sexually transmitted infections. Accuracy in identifying drug-related emergency department admissions is critical to understanding local burden of disease and assessing effectiveness of drug abuse prevention and overdose-reduction initiatives. In response to the growing opioid public health crisis and recommendations to improve the timeliness of reporting opioid-related data, DOH-Seminole Epidemiology Program provides opioid-related data reports to support local prevention efforts. These efforts include improving timely opioid overdose reporting to key stakeholders. This information is a valuable tool for planning and can help identify where communities are struggling, help tailor interventions, and show improvements. At the present time, our staff utilizes different available surveillance platforms such as ESSENCE, EMS, Biospatial, ODMAP and local reports shared by Seminole’s Sheriff’s office. The number of overdoses and deaths reported are different in each report. The fellow will evaluate passive vs. active syndromic surveillance system and provide recommendations to integrate available data for accuracy. The primary goal of the project is to improve consistency of opioid overdose and death reports from local hospitals, urgent care facilities, EMS and Sheriff’s department, evaluate gaps in data, and development of interventions to address identified issues and opportunities for improvement.

Project deliverables include:

- Conduct trainings with urgent care and hospital ED staff regarding opioid overdose or death reporting (different ways that will assist triggers when reports are generated).
- Generate reports that include key messages, quick facts describing the topics, figures illustrating relevant data, language describing recommendations, evidence-based approaches, and suggested actions and resources.
- Submit a written report to the Florida Epi Update or other peer-reviewed journal and participate in a conference via oral or poster presentation.
- GIS mapping of opioid overdose and deaths reports exported from the above-mentioned data sets to identify high-risk areas in Seminole County.
- Provide professional and technical epidemiologic consultation and assistance to public and private health care providers.
- Conduct special projects/epidemiological studies and support administrative and management activities.
- Participate in a variety of activities designed to develop the Fellow’s competency in three main areas: epidemiologic process, communication, and professionalism.
- Perform descriptive and analytic epidemiologic investigations, research, and public health surveillance of disease outbreaks and other field epidemiologic investigations of public health importance.
- Assist with the development, implementation, reporting, and publication of special epidemiological studies in peer-reviewed journals, present at professional meetings, and disseminate vital public health information to the media and the public.
- The CSTE Fellow will participate in local drug prevention task forces, collaborate with local stakeholders to provide surveillance data to inform and evaluate interventions, produce county- and region-level data dashboards, participate in county-led opioid prevention efforts, explore
and analyze trends in referrals for opioid overdose at emergency departments (ED) and trends in naloxone administration at EDs.

- The Fellow will contribute to and aid in the development and dissemination local-level opioid-related reports to public health partners.

**Additional Project Innovation Lab and Epidemiology**

The Fellow will work closely with the Program Administrator of the newly launched Seminole Health Innovation Lab at the Center for Public Health Leadership, Health Equity and Research which offers our associates, partners and community members a safe space to collaboratively brainstorm, prototype, and test both disruptive and non-disruptive innovative ideas that will protect, promote and improve the health of the people of Seminole county.

**Additional Project Hepatitis C Treatment and Linkage to Case**

Hepatitis C is the most frequently reported bloodborne pathogen in the U.S. While various Hep C treatment options are available, barriers are often encountered for patients who are un-insured or under-insured. DOH-Seminole is proposing a project to increase Hepatitis C treatment rates in Seminole County. The fellow will work as a part of the multi-county Hepatitis treatment consortium to quantify the burden of Hepatitis C in consortium area, identify existing and potential Hepatitis C treatment providers, and establish a mechanism for linkage to care for all individuals reported as Hepatitis C positive.

Project deliverables include:

- GIS mapping of Hepatitis C cases and treatment providers
- Identification of grants and other funding opportunities
- Development of a Hepatitis C treatment model
- Coordination of a Hepatitis C treatment training for local providers
- Develop Hepatitis C treatment educational packet aimed at patients and providers
- Collect, analyze and publish intervention findings

**Preparedness Role**

The fellow will participate as a part of the Epidemiology Strike Team. Previous interns have had the opportunity to deploy to neighboring counties for a foodborne outbreak involving hundreds of guests at a local theme park, a seroprevalence study of locally acquired chikungunya virus, locally acquired Zika virus response, and the 2nd MERS case reported in the United States. The Fellow will also have the option of participating in hurricane special needs shelter duty.
**Additional Activities**

The fellow may be involved in activities in the STD, TB, HIV and/or Refugee Health Program either conducting case investigations and or community outreach to promote awareness. Other activities could include cross training in environmental health program and Office of Health Promotion to better understand how public health works at the local level.

- Conduct case-based surveillance activities and epidemiologic investigations.
- Collect, collate, analyze and present surveillance data utilizing the latest software version of Epi Info, SAS, SPSS and/or other data analysis and statistical software.
- Act as liaison to the Epidemiology Program Manager and Disaster Preparedness as required, and the Fellow will be cross trained to support integration efforts to enhance disease control programs and EPI capabilities.
- Participate in and contribute to overall Infectious Disease Epidemiology Program planning and evaluation activities.
- Assist with coverage of the Epidemiology unit during times of heightened response efforts, outbreaks, and increase need in preparedness and disaster team response capabilities (i.e. EPI Strike Team).
- Actively participate with emergency operations plan review to ensure that the Center for Disease Control and DOH-Seminole Public Health Emergency Preparedness (PHEP) Capabilities are integrated into all aspects of DOH-Seminole public health preparedness planning and response.
- Apply an understanding of disease surveillance systems, epidemiologic investigation techniques, and the ability to analyze data and apply disease control methods to individuals and the community.
- Apply proficient utilization of MERLIN, HMS, FLSHOTS, PRISM and other disease-based data management and reporting systems to facilitate the reporting and analysis of reportable diseases in the community.

**Mentors**

**Primary**

Ana Scuteri MPH  
Community and Population Health Director

**Secondary**

Kevin Baker MPH  
Epidemiology, Hepatitis, TB, and Refugee Health Manager