**Injury**

Assignment Description:

The Chronic Disease and Injury (CDI) Section of the NC Division of Public Health (DPH) is committed to providing an exceptional, well-rounded experience for a CSTE/CDC Applied Epidemiology Fellow. As a national leader in chronic disease & injury prevention and control, we have a strong history of hosting CDC Prevention Specialists, UNC-Chapel Hill public health students, student interns, and two current Applied Epidemiology Fellows (Class IX & X). This assignment will allow a Fellow to develop applied epidemiology competencies under the guidance of experienced mentors (one who has mentored all past fellows) by engaging in both narrowly-focused and cross-cutting projects in chronic disease epidemiology, with opportunities to gain experience in communicable disease, injury epidemiology, environmental public health, and public health preparedness.

Mentors will work with the Fellow to choose projects that fit with the Fellow's interests, fulfill the competency areas, and provide solid broad-based experience in applied chronic disease or injury epidemiology. These projects will involve the Fellow with staff across the Section, DPH, and from other states and CDC. Projects provide opportunities to present at national/state conferences and submit manuscripts to peer-reviewed journals. The Fellow will present work to state advisory boards and will be mentored in handling data/technical assistance requests (e.g., from public, legislators, and media). Projects in chronic disease or injury areas not mentioned below can easily be arranged. Mentors will also assist in pointing out aspects of current or proposed public health policies for which epidemiologic and other surveillance data can help drive/support these policies.

All mentors have 18+ years of experience in applied epidemiology, have enjoyed mentoring many graduate students and fellows, and are committed to ensuring an exceptional experience for an Applied Epidemiology Fellow. The CDI Section includes many innovative public health programs and an excellent staff of epidemiologists, providing the Fellow with many opportunities to learn and contribute.

Day-to-Day Activities:

Day-to-day activities will primarily depend on the nature of the project and experience and maturation of the Fellow. Initially, day-to-day activities will be strongly linked to one or more of the mentors as the Fellow gets oriented and acquainted to the programs and projects. As the Fellow develops capacity, more independent oriented activities will take the bulk of the workload. If new areas or projects are started, the mentors will work with the Fellow to get oriented and will check in to ensure progress toward reaching competencies is made. Communicating with past Fellows might illuminate anticipated daily activities over the course of two years. We would encourage you to reach out and speak with them.

Potential Projects:

Surveillance Evaluation Projects

- Child maltreatment surveillance, a new child abuse and neglect system created for Wake County (Raleigh) and serving as a pilot project for state implementation.
- Child Health Assessment and Monitoring Program (CHAMP), a surveillance system of child health implemented as a call-back to the BRFSS;
- NC's Controlled Substances Reporting System, a prescription drug reporting system;
- NC's Violent Death Reporting System, a CDC funded state wide surveillance on homicides, suicides and other violent deaths working directly with the Office of the Chief Medical Examiner (OCME) and law enforcement

Choice of surveillance systems will depend upon the Fellow's interests and competencies. Several other options are also possible and can be arranged as deemed appropriate.

Women's and Children's Health

- Working with the Child Fatality Task Force (a legislatively mandated group) to assess data needs, responding to data requests and developing specialized surveillance (e.g. designer drugs, ATV, SIDS, study drug use, etc.)
- Developing epidemiologic reports that can be updated annually
- Examining prescription drug use by youth
- Suicide attempts by young females and access to mental health services

Asthma

- Asthma co-morbidities, including heart disease, diabetes, obesity
- Using data from the NC Environmental Public Health Tracking system to examine asthma-related outcomes
- Epidemiologic investigations of disasters (e.g., wild fires) involving air quality impacts and respiratory ED visits
- Mapping and GIS applications in examining environmental factors and asthma
- Use of respiratory disease surveillance data to drive/support policy

Cancer Prevention & Control

- Utilize data collected by the NC Breast and Cervical Cancer Control Program
- Utilize data collected by the NC WISEWOMAN Project
- Contribute to surveillance and prevention activities in the state surrounding cancer, and the prevention and control of all types of cancer

Diabetes

- Establishing a state diabetes incidence rate
- Reviewing Medicaid data to establish a conversion rate from gestational diabetes to type 2 diabetes
- Use of GIS applications and other data to map diabetes disparities

Forensic Tests for Alcohol

- Interfacing with and educating the media on the scope of the DWI problem
- Analysis of Driving While Impaired (DWI) data- Phase II
- Offender targeted public service announcements
- Data-driven public service announcements

Heart Disease & Stroke Prevention

- Burden of Cardiovascular Disease

Injury & Violence Prevention

- Designing and developing SAS programs for automation of surveillance reports
- Analyses of NC-Violent Death Reporting System (all homicides and suicides in the state)
- Study examining prescription overdose deaths using CSRS and Office of the Chief Medical Examiner's data
- Development of critical data to support programs on suicide, residential fires, motor vehicle injures, and family violence

Physical Activity & Nutrition

- Epidemiologic burden of obesity
- Evaluating the Eat Smart, Move More Community Grant program to determine impact of these grants on community partnerships and environmental/policy changes to support physical activity and healthy eating.
- Analyses of Youth Risk Behavior Survey (YRBS)

State Center for Health Statistics

- Partnerships to evaluate CHAMPS, PRAMS, or BRFSS
- Working with State Center for Health Statistics staff to analyze, interpret, and disseminate data from FITNESSGRAM, a new NC system assessing student fitness levels and body mass index.
- Addressing Healthy NC 2020 objectives

Tobacco Prevention & Control

- Study how the movement away from traditional media (landlines toward cell phones; phone calls toward texting, social media etc.) affects Quitline services in NC
- Special studies of at risk for tobacco use populations including LGBT and American Indian using YTS and/or BRFSS
- In depth trend analysis of BRFSS data to prepare for 2020 strategic planning.
- Produce reports based on NC School Profiles

<u>Preparedness Role</u>

Like all NC Public Health employees, the Fellow will be trained on Incident Command using federal FEMA curriculum. The Chronic Disease and Injury Section has a strong relationship with the Office of Public Health Preparedness and Response with the Epidemiology Section. If the Public Health Command Center is opened, based on need, requests will be made throughout DPH for volunteers to help manage the situation. Staff with specialized skills might be sought to help provide expertise for specific operations. Section epidemiologists, including CSTE fellows, have helped during hurricanes, floods, H1N1, food-borne outbreaks and other disaster events. Roles, tasks and length of detail will be negotiated with the Fellow. The past four CSTE Fellows have all worked short-term details and had positive experiences. In fact, Nicole (Standberry) Lee was detailed to help with H1N1 for a brief period in spring 2008, which led to a full-time position after her Fellowship which she still holds.

Formal training in outbreak investigation is available, and the Fellow will engage in at least one field investigation with the Communicable Disease Branch. The Fellow will take the DPH-required public health preparedness classes and will be included in Public Health Preparedness and Disaster Epidemiology Working Group efforts (CSTE Disaster Workgroup). Some potential public health preparedness projects include analyzing data from post-hurricane community assessments to identify effects on acute injuries and chronic disease, and opportunities for involvement in response to emergency events like hurricanes.

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| Assignment Location: | Raleigh, NC |
| Primary Mentor: | Kevin Ryan, MD, MPH<br>Chief, Women's and Children's Health Section<br>North Carolina Division of Public Health |
| Secondary Mentor: | Scott Proescholdbell, MPH |

State Injury Epidemiologist
North Carolina Division of Public Health