Chronic Diseases, Injury

Kansas Department of Health and Environment, Bureau of Health Promotion

Topeka, Kansas

Assignment Description

The CDC/CSTE applied chronic disease epidemiology fellow position will be located within the Bureau of Health Promotion (BHP) at the Kansas Department of Health and Environment (KDHE) in Topeka, KS. BHP is committed to build and enhance the Kansas State Health Department's capacity to serve as the leader in addressing the chronic disease and injury related issues and in establishing the health surveillance systems necessary to provide high quality scientific information to inform evidence based strategies to improve the health of Kansans. To fulfill this commitment, BHP has developed strong chronic disease and injury prevention and population based surveillance programs that provide excellent continuous on-the-job training opportunities for the professional development of staff thus positioning them to serve as public health leaders. Epidemiologists within BHP work closely to provide epidemiologic and evaluation support to staff with subject matter expertise in the areas of heart disease and stroke, tobacco prevention, diabetes prevention, healthy eating/active living, and injury prevention.

Individuals, including CSTE fellows, who want to pursue a career in the field of epidemiology and public health can take advantage of these training opportunities and enhance their professional knowledge and skills. The CSTE fellow will be an integral part of the Bureau. He/She will be encouraged to determine the main analytic and evaluation projects that they want to pursue for the fellowship through discussions with the mentors and will conduct activities required to complete these projects according to the fellowship guidelines.

Day-to-Day Activities

- Consult with mentors to design and receive feedback on project objectives, methodologies, and analysis plans.
- Conduct literature reviews, develop, maintain and use datasets, maintain quality control and manage projects.
- Work on the selected fellowship projects including statistical analyses of the data using SAS and other relevant software (e.g. R, ArcGIS, etc.).
- Create and disseminate products, including fact sheets, maps, reports and presentations, to inform stakeholders and guide policy and program development.
- Disseminating their project work by preparing and presenting in national and state conferences and developing peer reviewed manuscripts/scientific papers.

Other routine activities will include:

- Participate in program staff meetings (based on the fellowship projects) where program activities are discussed to have overall understanding of the application of their project in context of the program activities.
- Participate in monthly BHP epidemiology meetings to share and discuss epidemiologic methodological and analysis techniques required to provide epidemiologic support to the programs.
- Engage in networking opportunities at statewide partnership meeting such as the Chronic Disease Alliance of Kansas (CDAK).
- Participate in professional development opportunities, including workshops and webinars
- Present scientific work at state and national conferences including the Kansas Public Health Association annual conference, the CSTE Annual Conference, and programmatic conferences related to the Fellow's projects such as Society for Prevention Research, American Public Health Association, Society for Epidemiologic Research.

Surveillance Activity   **Asthma Surveillance - Kansas Adult and Child Asthma Call Back Survey (ACBS) Activity**

This project will work closely with the BHP BRFSS team for implementation of the Kansas Adult and Child Asthma Call Back Surveys (ACBS). The Kansas Adult and Child ACBS are conducted annually with the KS BRFSS Survey to provide population based in-depth asthma related information for adults and children in Kansas. The KS BRFSS is designed as dual sampling methodology survey of the non-institutionalized adults living in private residents & college housing with landline and/or cellphone service. Respondents who report asthma are then recruited for the Adult ACBS. KS BRFSS also collects data on asthma prevalence among randomly selected child living in the household of the primary respondent. The children with asthma are recruited for the child ACBS. In household where both the primary respondent and the randomly selected child both have asthma then either adult or child is selected by applying computerized random selection process to participate in respective ACBS. The fellow will analyze the ACBS data along with various other asthma data sources, including Kansas BRFSS, vital statistics, hospital discharge data, and Medicaid data to create an asthma burden document for Kansas.

Surveillance Evaluation   **Chronic Disease Risk Reduction Grant Program Evaluation**

The BHP awards grants to local counties in Kansas to reduce the burden of chronic disease through evidence-based primary prevention activities (tobacco use prevention and healthy eating/physical activity promotion). Logic models are used to guide the local grantees in the selection of program activities, output tracking, and designing and implementing evaluation plans. Potential project activities for the fellow include (1) evaluate the current surveillance system used by the local grant program and the policy tracking tool, and (2) implement a state-level tracking system to aggregate policy and output information from local grantees for required state and federal reports. Depending on the Fellow's interests, this project could also be developed into a major project that involves designing and implementing an evaluation plan such that short term outcomes data may be aggregated across local programs to provide state level estimates. Results from this project would include developing analytical protocols, analysis results and an evaluation report with recommendations.

Major Project   **Health Profiles for Local Communities - KS BRFSS Expansion Project**

 Beginning in 2009, the Kansas BRFSS was expanded in response to demand from county health officials for local level health risk behavior data for a 10-year period. The survey now collects adequate sample data during odd years (2009, 2011, 2013, 2015 and 2017) to provide direct local level estimates by county or region for chronic conditions (including diabetes, cardiovascular health, asthma, cancer, cholesterol, COPD, obesity), health care access, and risk behaviors (including tobacco, alcohol, fruits and vegetables, physical activity). Information from the local BRFSS expansion data is

used by community partners statewide to inform planning and policy efforts. Potential project activities for the Fellow include: analysis of local data related to chronic disease morbidity and risk factors of interest to the Fellow; compilation of data and write ups including development of maps and infographics to create health profiles for local communities; and assisting communities in use of these profiles in program and policy work.

Major Project   The Impact of Tobacco Tax on Tobacco-related Revenue, Prevalence and Morbidity

In July 2015, the Kansas cigarette excise tax paid by retailers and distributers increased from $0.79 per pack to $1.29 per pack. This project would analyze monthly tax revenue information from the Kansas Department of Revenue, as well as data on tobacco use from the KS BRFSS and hospital discharge data for tobacco-related morbidity on revenue, tobacco use and tobacco-related morbidity. Additional analyses will examine differences across key sub-populations known to be disproportionately affected by tobacco. The Fellow will also develop dissemination materials for this project to reach a variety of stakeholders including the public, officials, and community and national partners.

Additional   Diabetes and Cardiovascular Disease Prevention and Management Project
Project

The Health Systems Section of BHP collaborates with state and local partners to improve the quality of care and strengthen community clinical linkages between health systems and community resources to assist patients in making lifestyle changes to address behavioral risk factors of hypertension and diabetes (obesity, poor dietary habits and physical inactivity). As part of these efforts, the Fellow would work closely with Health Systems staff and the BHP Chronic Disease epidemiologist to analyze electronic health records (EHR) data regarding medication adherence and patient self-management as well as information about community pharmacists' practices from Kansas Pharmacy Practice Innovation survey. Potential project activities for the fellow include: (1) comparing EHR measures and indicators related to hypertension, diabetes and obesity burden and interventions to population based data such as KS BRFSS, (2) designing and implementing analysis protocols that link state and county-level data from EHR systems, the Kansas Pharmacy Practice Innovation Survey and population based surveillance data systems, (3) collecting information on how well health care systems understand the benefits of utilizing EHR and population-level data and (4) providing recommendations for further strengthening and expanding the use of clinical and surveillance data to improve the quality of care provided to Kansans with diabetes and cardiovascular disease.

Preparedness Role

The Fellow will be trained on the Federal Emergency Management Agency's Incident Command curriculum. In the event of a public health emergency, the fellow will work as part of a State Epidemiologic/ Surveillance team and will participate in designing and conducting surveillance methodologies to track issues related to the emergency.

Additional Activities

Additional activities:

Cancer Prevention and Control: Participate in Comprehensive Cancer Control Regional Partnership activities related to prevention, early diagnosis, treatment & survivors' health issues

Physical Activity and Nutrition

- Analyze the epidemiologic burden of obesity.
- Analyze disparities related to risk factors and health consequences related to obesity using information from the Kansas Behavioral Risk Factor Surveillance System, vital statistics, hospital discharge data and the Kansas Youth Risk Behavior Survey.

Tobacco Prevention & Control:

- Assist the Tobacco Use Prevention and Control Program with the analysis of a Kansas Tobacco Quitline data to evaluate Quitline service delivery and effectiveness.
- Examine utilization of the Medicaid benefit for tobacco cessation.
- Utilize Geographic Information Systems (GIS) to examine disparities in the density of tobacco retail outlets located in proximity to schools .
- Analyze various tobacco data sources, including Kansas BRFSS, Adult Tobacco Survey, Youth Tobacco Survey, vital statistics and hospital discharge, to create a tobacco burden document for Kansas.

Injury and Violence Prevention

- Analyze the burden of older adult falls in Kansas with the following data sources: Kansas BRFSS, WISQARS, vital statistics, hospital discharge and/or emergency department visits.
- Create a spreadsheet outlining the utility of the following data sets to describe the prescription drug epidemic in Kansas: NSDUH, Medicare Part D, TEDS, syndromic surveillance, EMS, Poison Control Center, KTRACS and alternative open-source data (e.g., publish DEA drug seizure data).
- Survey and disseminate results on whether Kansas is following the 2012 National Highway Traffic Safety Administration (NHTSA) guidelines for safe transport of children by EMS along with identified barriers and facilitators that attribute to following the guidelines.
- Conduct a state-wide pediatric readiness assessment to ensure all Kansas emergency departments have the essential guidelines and resources in place to provide effective emergency care for children.
- Examine the association between injury-related outcomes and county-level life expectancies using data from the Kansas Behavioral Risk Factor Surveillance System. Examples of injury-related outcomes can include adverse childhood experiences (ACE), suicide attempt, sexual violence, seatbelt use, older adult falls and safe firearm storage.

Heart Disease and Stroke Prevention

- • Evaluate race and location coding within hospital discharge and vital statistics databases.
- • Analyze of Sodium Reduction in Communities – Shawnee County Survey data. The survey consists of three components: (1) a telephone interview to collect information on individuals' knowledge, attitudes and behaviors related to sodium consumption; (2) clinical measurement of height, weight and blood pressure; and (3) a web-based Automated Self-administered 24-hour Dietary Recall (ASA24) instrument created by the National Cancer Institute to provided validated nutrient information, including sodium intake, based on a 24-hour period.

Overarching and Other Areas:

- • Healthy Kansans 2020
- • Development of scientific articles for publication in peer-reviewed journals (assistance from KU Faculty, Dr. Faseru will be made available).
- • Field Investigation of Epidemic in collaboration with infectious disease epidemiologist.

Mentors

Primary   Elizabeth Federman ScD

Senior Epidemiologist

Secondary   Ghazala Perveen

Director of Science and Surveillance/Health Officer II