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Chronic Disease

The Kansas Department of Health and Environment (KDHE) include 2 PhD epidemiologists, 2 physicians, and 12 MPH level epidemiologists. KDHE offers an extremely wide range of challenging epidemiologic projects in an interdisciplinary team of professionals. Strong ties to two major state universities offer collaborative relationships between academia and applied public health. The candidate can experience both urban and rural, and infectious and non-infectious disease-related public health problems. The relatively small working environment gives epidemiologists high visibility, access to a variety of data sets, and access to top management at KDHE and other institutions (the Kansas Health Foundation, the Kansas Health Institute, the Kansas Medical Society).

The Office of Health Promotion (OHP) is responsible for the core public health functions relating to reducing the preventable burden of chronic diseases and injuries and which were identified as health priorities for Kansas through the Healthy Kansans 2000 Planning process. Program activities are supported by federal and private grant funds that have been obtained through competitive process and through collaboration with partner organizations to leverage funds from existing resources. Specific areas of study for a candidate include:

1) Evaluation of the Kansas Hospital Discharge Data to assess utility of its information for describing & assessing the burden of various chronic diseases in Kansas: The Kansas Hospital Discharge Data have been compiled from surveys submitted by Kansas Community hospitals, which include institutions that are non-federal, short term, general and other special hospitals whose facilities are open to the public.

A comprehensive evaluation of the Kansas Hospital Discharge Data will include developing an in-depth understanding of the reporting mechanisms over a time period and related issues, variable definitions, extent of completeness of information, data utilization for describing & assessing the burden of various chronic diseases in Kansas, limitations with respect to utility of data and other relevant issues. Projects could also involve data analysis with regard to certain issues related to one or more chronic diseases.

A CSTE Fellow will have an opportunity to conduct this comprehensive evaluation and develop a project report providing detailed information on possible utilization of information from this database that could be useful for various chronic disease control and prevention programs of Office of Health Promotion.

2) Research project involving hypothesis testing and statistical analyses using the data from the Kansas Women's Health Survey: The Kansas Women's Health Survey was conducted in 2003 by the Health Risk Studies Program of the Office of Health Promotion and was funded by the Kansas Breast and Cervical Cancer Early Detection Program and the Bureau of Children, Youth and Families. It is a population-based survey based on a disproportionate stratified random digit-dial sample. Survey topics include: cancer history, breast and cervical cancer screenings, colorectal cancer screening, excess sun exposure, pregnancy, breast feeding, folic acid, osteoporosis, hormone replacement therapy, cardiovascular disease awareness, tobacco use and exposure, and health care access.

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A CSTE Fellow will have an opportunity to identify a specific research question and develop and conduct a research project involving secondary data analysis using the survey data. The project results can be utilized for making recommendations to the respective chronic disease control program. A manuscript/publication can be prepared based on the results of the project. In addition, fact-sheets can be developed for wide variety of audiences.

A CSTE Fellow will have an opportunity to understand the methodology of a population-based database, utilize statistical techniques, communicate epidemiologic findings and make public health recommendations to health professionals and other audiences. In addition, it will also provide an opportunity to understand the translation of epidemiologic results into public health practice.

Assignment Location: Topeka, Kansas

Primary Supervisor: Gail Hansen, DVM, MPH
Interim State Epidemiologist, Kansas Department of Health and Environment

Advanced Degrees: DVM, University of Minnesota (1982)
MPH, University of Washington (1993)

Secondary Supervisor: Ghazala Perveen, MBBS, PhD, MPH
Health Officer II/Assistant Director of Science, Kansas Department of Health and Environment

Advanced Degrees: MBBS, Dow Medical College (1987)
MPH, University of Oklahoma (2002)
PhD, University of Oklahoma (2002)

Proposed Projects related to Chronic Diseases and their Control in Kansas:

1) Research project involving hypothesis testing and statistical analyses using the data from Kansas Health, Activity, and Nutrition Survey:

The Kansas Health, Activity, and Nutrition Survey is being conducted with funding from the Sunflower Foundation of Topeka, Kansas through a grant to Kansas Health Institute, with Kansas Department of Health and Environment as a collaborative partner contractor for project design and data collection. The primary goals of this project are 1) to collect household survey data that will provide precise estimates of the prevalence of obesity in Kansas, 2) to obtain more detailed information regarding household characteristics and health factors related to obesity among high-risk subgroups in the population, particularly Hispanic and black / African American Kansans, and 3) to make the results of this survey readily available for use in the development of effectively targeted obesity-reduction interventions. Topics on this survey include: general health status, time constraints, physical activity and barriers, community environment, sedentary behaviors, diet and diet-related knowledge and beliefs, meal settings, weight control, food purchasing decisions and availability of food choices, food security scale, demographics, and child health, physical activity, and nutrition. A CSTE Fellow will have an opportunity to identify a specific research question and develop and conduct a research project involving secondary data analysis using the survey data. The project results can be utilized for making recommendations to the respective chronic disease control program. A manuscript/publication can be prepared based on the results of the project. In addition fact sheets could be developed for wide variety of audiences. A CSTE Fellow will have an opportunity to understand the methodology of a population-based database, utilize statistical techniques, communicate epidemiologic findings and make public health recommendations to health professionals and other audiences. In addition, it will also provide an opportunity to understand the translation of epidemiologic results into public health practice.

2) Research project involving hypothesis testing and statistical analyses using the data from Kansas Child Health Assessment and Monitoring Project (K-CHAMP):

The Kansas Child Health Assessment and Monitoring Project (K-CHAMP) is a public health study sponsored by the Kansas Department of Health and Environment (KDHE). The primary objectives of this study are to determine the prevalence of overweight among children and adolescents in kindergarten through grade 12 in Kansas, as well as the prevalence of associated factors such as nutrition, physical activity, and screen time (e.g., television viewing, video game usage, computer usage, etc.) for public health planning purposes. Another major objective of the project is to examine the relationships between overweight, nutrition, physical activity, and academic achievement. Data collection for this project is being conducted during the 2004-2005 school year, and is expected to be completed by May 2005. The comprehensive nature of this study will enable the development of research questions regarding the relationships between overweight, nutritional, physical activity, and screen time behaviors, and academic achievement. Data collected will provide the ability to conduct multivariable modeling to control for confounding factors when examining the relationships between outcomes of interest and

explanatory or predictive factors. A CSTE Fellow would have the opportunity to analyze these data and prepare publications.

3) Research project involving hypothesis testing and statistical analyses using the data from Youth Risk Behavior Survey:

The Youth Risk Behavior Survey (YRBS) is a school-based survey among students in grades 9-12 designed to measure health risk behaviors contributing to leading causes of mortality and morbidity among youth. Although Kansas has conducted the YRBS in previous years, the survey for the 2004-2005 school year was the first to have response rates high enough to meet CDC standards. Data from the KS YRBS will enable the establishment of baseline estimates of the prevalence of health risk behaviors, development of policies and programs, and targeting resources. In addition to descriptive data analyses, a CSTE Fellow will have the opportunity to identify pertinent research questions and develop and conduct a research project. The Fellow will also develop an understanding of the methodology of a population-based database, utilize statistical techniques, communicate epidemiologic findings and make public health recommendations to health professionals and other audiences, and to understand the translation of epidemiologic results into public health practice.

4) Research project involving hypothesis testing and statistical analyses using the data from the Kansas Women's Health Survey:

The Kansas Women's Health Survey was conducted in 2003 by the Health Risk Studies Program of the Office of Health Promotion and was funded by the Kansas Breast and Cervical Cancer Early Detection Program and the Bureau of Children, Youth and Families. It is a population-based survey based on a disproportionate stratified random digit-dial sample. Survey topics include: cancer history, breast and cervical cancer screenings, colorectal cancer screening, excess sun exposure, pregnancy, breast feeding, folic acid, osteoporosis, hormone replacement therapy, cardiovascular disease awareness, tobacco use and exposure, and health care access. A CSTE Fellow will have an opportunity to identify a specific research question and develop and conduct a research project involving secondary data analysis using the survey data. The project results can be utilized for making recommendations to the respective chronic disease control program. A manuscript/publication can be prepared based on the results of the project. In addition fact-sheets could be developed for wide variety of audiences. A CSTE Fellow will have an opportunity to understand the methodology of a population-based database, utilize statistical techniques, communicate epidemiologic findings and make public health recommendations to health professionals and other audiences. In addition, it will also provide an opportunity to understand the translation of epidemiologic results into public health practice.

5) Other Opportunities:

In addition to above-mentioned specific projects, other opportunities are also available. The Office of Health Promotion has access to Kansas BRFSS and Mortality datasets. Special Studies section of the Office of Health Promotion is responsible for conducting annual statewide BRFSS since 1992. Kansas BRFSS data have enabled public health professionals in Kansas to assess health risk factors known to contribute to or increase the risk of chronic and communicable

diseases, acute illness, injury, disability, and premature death. A CSTE Fellow can utilize BRFSS datasets for his/her project. Similarly, annual Kansas's mortality data are made available to the Office of Health Promotion by the Center for Health and Environmental Statistics, KDHE. Mortality data can also be utilized by a CSTE Fellow to assess the burden of mortality due to a specific chronic disease in Kansas. In addition, the Office of Health Promotion also has several chronic disease & injury control programs (Breast and Cervical Cancer Screening Comprehensive Cancer Control, Tobacco Use Control, Injury Prevention & Control, Arthritis Control, Diabetes Control, Cardiovascular Health programs). These programs can also provide opportunities to conduct program evaluation, and to work with multidisciplinary teams addressing chronic disease issues in Kansas. Recently, Comprehensive Cancer Control Planning workgroups are in the process of identifying the priority data and research areas. A number of priority projects can be identified through these efforts in near future. Healthy Kansans 2010 project is another project through which priority projects will be identified in near future. These projects can also provide opportunities for the CSTE fellowship assignments.