Chronic Disease

Assignment Description

The chronic disease prevention and control programs of the Nebraska Department of Health and Human Services are located within the Community Health Section of the Division of Public Health. Within the Community Health Section, most of these programs (Diabetes Prevention and Control, Cardiovascular Health, Tobacco Free Nebraska, Nutrition and Activity for Health, and Comprehensive Cancer Control) are located in the Health Promotion Unit. Breast, cervical, and colorectal cancer screening programs are located in the Lifespan Health Services Unit, which is also part of the Community Health Section. The Offices of Rural Health and Minority Health and Health Equity (both are within the Community Health Section) are also involved in related issues that directly affect Nebraska's rural and minority race/ethnic populations. The administrative area where the fellow will be located, the Public Health Support Unit, is also part of the Community Health Section and provides data collection, programming, and analytical support for several of the databases (e.g., state cancer registry, death certificates) that the fellow may utilize during his/her tenure at DHHS. The staff that carry out the activities of the various chronic disease prevention and control programs of DHHS include professionals with expertise in chronic disease epidemiology, as well as health education, nursing, nutrition, physical activity, computer programming, and statistical analysis. There is a strong spirit of cohesion among the people who are involved in chronic disease within DHHS, with a willingness to work across individual program boundaries to accomplish common goals. In this spirit, DHHS chronic disease staff would be readily available to the fellow for orientation and consultation.

Day-to- Day Activities

1) Develop an understanding of and familiarity with chronic disease datasets;
2) Refine data processing and data analysis skills;
3) Understand how to assess surveillance systems;
4) Analyze and interpret data; and
5) Prepare epidemiology reports.

The training goals for the Fellow will be defined by Centers for Disease Control and Prevention (CDC)/Council of State and Territorial Epidemiologists (CSTE) Applied Epidemiology Competencies (AECs). At the completion of the fellowship, the Fellow will function as a well-qualified Tier 2, mid-level epidemiologist and will be highly employable in a wide range of public health settings.

Potential Projects

Below are three areas within chronic disease that present potential projects that the fellow could consider:

1) The state cancer registry is a vast repository of information about cancer in Nebraska, offering a variety of research and evaluation opportunities. Nebraska's cancer registry has operated on a statewide basis since 1987, and has recorded over 200,000 diagnoses. From 1995 to 2009 the registry has received the gold standard for data quality from the North American Association of Central Cancer Registries, the chief accreditor for cancer registries in the U.S. DHHS staff and outside researchers have

used registry data over the years, but there is still much information collected by the registry (treatment and survival, in particular) that has rarely been analyzed. The registry has also begun to geocode its entire caseload, offering GIS research opportunities.

2) In a joint effort of the DHHS Diabetes Prevention and Control and Cardiovascular Health programs, a network of 6 rural health clinics in Nebraska has recently implemented an electronic patient registry to help improve the quality of care that they provide to their patients who have either cardiovascular disease and/or diabetes. The data collected as part of this registry include blood pressure measurements, lipid panel results, HbA1c test results, aspirin use, tobacco use, foot exams completed, influenza and pneumonia immunizations, and regular exercise. These data, which are available in aggregate form at DHHS, present an opportunity to assess the effect of a chronic disease registry on the individual health care provider's practice (i.e., a "physician report card"), and the value of a patient registry to assist health care providers in managing these two chronic conditions.

3) DHHS received two grants to create datasets to study cardiovascular disease outcomes. The first grant is to link emergency medical services (EMS), hospital discharge, and death certificate data to study outcomes. This dataset provides a variety of opportunities to assess the types of procedures performed and evaluate differences among persons not brought to emergency rooms by EMS compared with those who are. Also, EMS response times can be evaluated to determine association with cost, mortality, and procedures provided; outcomes among people who have repeat hospitalizations; and an evaluation of EMS and hospital services. The second grant is to develop infrastructure for real-time capture of hospital inpatient data for tracking of cardiovascular disease. These data will approximate hospital discharge data but will include additional variables and will be captured in real-time. By the time this fellowship assignment will start, DHHS plans to have piloted the system at one large health system in the state and further developed processes for real-time capture of such data from 10 other facilities in Nebraska. The proposed advantage of this novel dataset will be ability to track impact of prevention interventions in real-time rather than having to wait for hospital discharge data to become available. At the current time, these data are provided annually and are not available until nine months after year's end.

Preparedness Role

The fellow will be expected to respond to acute and emergent problems related to chronic disease, including emergency response activities related to naturally-occurring and intentional events which could have an impact on chronic disease morbidity and/or mortality such as access to medical care/medications. Nebraska's Bioterrorism Preparedness Program offers training and exercises to ensure preparedness in the event of an incident or attack involving biological, chemical, radiological, or other agents of bioterrorism. The chronic disease fellow can access this training and participate in such exercises as appropriate.

Assignment Location:	Lincoln, Nebraska
Primary Mentor:	Bryan Buss, DVM, MPH CDC Career Epidemiology Field Officer Nebraska Department of Health and Human Services
Secondary Mentor:	Bryan Rettig, MSPH Program Analyst

Nebraska Department of Health and Human Services