New Hampshire-Armenti

Chronic Disease

The New Hampshire Division of Public Health Services (DPHS) is interested in hosting a CSTE Fellow within the Bureau of Disease Control and Health Statistics to work with the Chronic Disease Control and Prevention Section. The CSTE Fellow would be located in the Health Statistics and Data Management (HSDM) section of the Bureau. This section provides epidemiological and statistical support for the Behavioral Risk Factor Surveillance Survey, Injury Prevention Program, and Cancer Registry, and works closely with a variety of program Epidemiologists within DPHS. From this location, the Fellow will have access to several large data systems, including: the Cancer Registry, hospital discharge data, real-time emergency room visit data, BRFSS, birth and death data, live poison control data, live EMS data, and private and Medicaid insurance claims database (in development). Access to other data systems outside of the domain of HSDM include: the Youth Tobacco Survey, the YRBS and various university-based data systems.

Special Projects

There will be two primary focus areas where the Fellow will fill a key role.

1) First, the Fellow will be part of the DPHS team preparing the statewide cardiovascular disease plan. The Fellow will play an integral role by evaluating and analyzing available data sets, including the hospital inpatient and discharge data, ambulatory care data, mortality data, and private insurance and Medicaid claims data, in order to determine the heart disease and stroke burden in NH. The Fellow will also review risk factor data through the Behavioral Risk Factor Surveillance Survey to characterize the health status of NH's population.

   Part of the work will include an analysis using TEMSIS (Trauma and Emergency Medical Services Information System) to assess timeliness of stroke and cardiovascular symptoms onset to 911 calls and EMS response. Using this tool to determine the time between onset of symptoms and the 911 call will allow us to discern whether or not there is a problem with response rates, and whether people know to call 911 (do they recognize the symptoms of a stroke or heart attack?). Response and "delivery" time to the hospital can be compared to the national standard to determine the effectiveness of the EMS system. We will evaluate the difference between urban and rural response time and the importance of reducing the response time to improving stroke and CVD outcomes.

   While the TEMSIS project is still in its pilot phase, it is expected that most NH communities will be enrolled in the program over the next year or two. The Fellow will work closely with the researcher developing TEMSIS to make potential links to existing administrative data sets such as hospital data (inpatient and discharge). This provides an important step in measuring health outcomes in patients with stroke or heart disease.

   The Fellow's work to evaluate and analyze our existing data will bolster the potential linking of EMS data to help identify important health risk factors and to recommend interventions or measures to improve stroke and CVD health outcomes.

2) Second, The Fellow will provide leadership for NH's public health intervention to reduce obesity morbidity and mortality. Working closely with the Nutrition & Health Promotion Section within DPHS, the Fellow will produce data analysis and reports on overweight and obesity to support the preparation of our statewide obesity planning process. This would entail a comprehensive assessment of the data on overweight and obesity (burden), identification of data gaps, and determination of needed data for the planning process. One area the Fellow will investigate is the feasibility of adding more detailed questions on the 2008 BRFSS survey. The current BRFSS question asks about accumulating activity in 10-minute increments throughout the day. We believe this question results in inaccurate and conflicting data, i.e. our adult physical activity rates have increased from 24% in 1998 to 55% in 2003 while overweight and obesity rates went from 50% in 2000 to 58% in 2004. The Healthy People/Healthy New Hampshire 2010 objective is "30 minutes or more of physical activity on 5 or more days per week." In order for us to compare our 2010 baseline, this is the question we need to ask.

The Fellow will also assist NH in creating an assessment of the plan and planning process. Because NH currently is without capacity to fill the data component for the obesity planning process, the CSTE Fellow will serve a key function. Working with experienced state epidemiologists, the CSTE Fellow will develop a plan that specifies program objectives, sets priorities and outlines a detailed work plan and timeline for implementation and assessment of the plan.

Daily Activities

The CSTE Fellow will work under the supervision of the HSDM Chief, Dr. Karla Armenti, who will also serve as the Primary Mentor, and with the advice and guidance of the Immunization and Chronic Disease Epidemiologist, Dr. Lida Anderson, serving as Secondary Mentor.

By being part of the Health Statistics and Data Management section, the Fellow will have the opportunity to work with program epidemiologists providing analytical expertise to the various chronic disease programs. Such activities include:

- Work routinely with a number of very large databases including those listed above.
- Write programs to efficiently obtain and analyze data from these databases using SAS, SPSS, EpiInfo, Access and Excel.
- Perform a variety of routine calculations on chronic disease data with Excel, and assist with writing macros for the efficient performance of repetitive calculations.
- Assist in responding to a variety of chronic disease data inquiries, including disease clusters.
- Participate in the building of a web-based query system for agency-wide use.

As part of the HSDM Team, the Fellow can have other opportunities including:

- Work with the NH Cancer Registry in the writing of state cancer reports and publications.
- Assist in the evaluation of chronic disease indicators for their application to data linkages with environmental health data through the Environmental Health Tracking Program.

- Assist DPHS with the continuing evaluation of chronic disease surveillance systems and help develop and implement evaluation of special projects.
- Serve as an additional data and information resource for the New Hampshire Emergency Preparedness Plan (with special focus on the development of surveillance capacity to detect biological agents, and if necessary, on avian influenza).
- Serve on the Bureau's Data and Epi work groups.

In summary, working for the New Hampshire Division of Public Health Services, Bureau of Disease Control and Health Statistics will allow the CSTE Fellow to: develop a comprehensive set of core skills through competency-based training that is essential in public health practice and research; be exposed to applicable municipal, state and federal law; design and evaluate public health surveillance systems; conduct survey research and epidemiological analysis on a variety of chronic diseases using SAS, SPSS, Epi Info, Access and Excel, GIS Mapping; working with program monitoring and evaluation; preparing manuscripts for publication; and play a lead role in writing an important grant.

Assignment Location: Concord, NH

Primary Mentor: Karla Armenti, ScD, MS
Chief of Health Statistics and Data Management

Advanced Degrees: ScD, University of Massachusetts Lowell (2001)
MS, University of Massachusetts Lowell (1997)

Secondary Mentor: Ludmila Anderson, MD, MPH
Chronic Disease Epidemiologist

Advanced Degrees: MPH, Boston University School of Public Health (2002)
MD, Charles University, Prague, Czech Republic (1996)