Chronic Diseases/Infectious Diseases

Assignment Description

The Vermont Department of Health (VDH) provides a unique setting to practice public health. Our staff recognize the challenges of practicing public health in the 21st century, and Vermont is pushing the envelope as nimble, small states can do. VDH is smaller than many other state health departments and this provides a greater breadth of experiences for staff and fellows. While public health expertise and function is organized by divisions within VDH, opportunities for cross-divisional work naturally arise as projects or tasks require a diverse skill set. As a fellow, this provides an opportunity to meet key individuals in many divisions and contribute to projects that affect the department and state as a whole. Vermont also has a unique centralized structure not seen in most states: there are no autonomous local health departments. Instead, VDH staffs district offices throughout the state that drive community work and implement a wide range of VDH programs. With 500 employees (including 3 fellowship alumni) and thoughtful leadership, VDH is not only a great place to practice public health, it plays a key role in Vermont's consistent ranking at the top of America's Health Rankings' list of healthiest states.

VDH is located in the heart of Burlington, Vermont on the shores of Lake Champlain. As the state's largest city, Burlington has a wide range of activities to enjoy year round. If you are interested in hiking, skiing, snowboarding, boating, biking, running, or any other outdoor activities, you could not find a better place to live and work. Burlington is also home to 5 different colleges and universities that contribute to rich social and cultural offerings, including great restaurants and an active music and art community. From the well-developed local food movement to the ecologically-minded social norms, Burlington's rating as Gallup Poll's 2011 Happiest Small City only scratches the surface. Finally, Burlington is two hours from Montreal and just a few hours from Boston and New York City.

Chronic Disease in Vermont

Vermont is not immune to the burden of chronic conditions. Over the last 30 years Vermont has seen a significant increase in the prevalence of obesity among adults and children, combined with a rise in chronic diseases including diabetes and heart disease. In alignment with the state's progressive approach to health care reform, the Division of Health Promotion and Disease Prevention (HPDP) is focused on integrated chronic disease prevention and health promotion. As a chronic disease epidemiologist, you would work closely with HPDP program managers on projects that include designing and evaluating surveillance systems, analyzing and interpreting surveillance data, acting as a liaison between the Division of Health Surveillance and HPDP chronic disease program staff. As a Fellow, this is an opportunity to use an epidemiologic perspective to inform prevention and public health practice in an integrated way.

Day-to-Day Activities

A fellow at VDH will be involved in the following kinds of activities:

- Management of large data sources, such as VHCURES all claims database, Docsite (statewide clinical registry), BRFSS, YRBS, VT Cancer Registry, public and private claims and HEDIS data, and more
- Statistical analysis and interpretation of data
- Presentation and reporting of data analysis
- Consultation with surveillance and program staff
- Coordination with healthcare organizations, such as Medicaid, Vermont Public Quality in Health Care, Health Care Exchange Programs, the Blueprint for Health and other community based clinical care organizations, amongst others
- Attendance at regularly scheduled staff meetings
- Meeting with external partners such as our network of free clinics, federally qualified health centers (FQHCs), Health Care Reform groups, Vermont Information Technology Leaders (VITL), about data issues related to population health reporting and chronic disease prevention

Potential Projects

At VDH there is strong institutional support for improving systems to facilitate data-driven decision making. Grounded in both descriptive and analytic epidemiology, HPDP recognizes the need to integrate many sources of chronic disease data in a way that is meaningful for informing and evaluating prevention and health promotion interventions. With chronic disease prevention as a state health improvement priority, the proposed project will be to evaluate and coordinate data systems used for chronic disease surveillance across HPDP. While some systems are already in place, this project would focus on integrating and aligning those systems to the benefit of all HPDP programs. With that as a foundation, the Fellow can recommend and undertake additional analyses as the opportunities arise.

Aspects of this project could include:

- Determining relevant data sources to include in this surveillance evaluation and integration effort
- Identifying and collaborating with staff at VDH or other entities who create a given data source
- Compiling data collection instruments for the identified data sources and creating a database with all of the relevant question/measures.
- Creating an integrated data source methodology report including population, sampling scheme, strengths, and limitations
- Determining a minimum standard set of measures (with potential stratification variables) that require regular updating
- Collaborating to establish standardized dissemination templates, tools, and policies

Additional Potential Projects

Participate in HPDP use of health care data to inform public health:

In the past decade, Vermont has had great success developing and implementing a health care reform infrastructure that uses a patient-centered medical home model, through the Vermont Blueprint for Health, to engage the core principles of local accountability for a defined population of patients and performance measurement, including patient experience data and clinical process and outcome measures.

Significant systems have been put into place in Vermont to measure and collect data and to develop processes to improve clinical performance and outcomes. Examples of these data sources include: all payers claims, HEDIS measures, population-based data like BRFSS, cancer registry, and hospital discharges, National Quality Foundation (NQF) measures, National Commission of Quality Accreditation (NCQA) certification results, Continuous Quality Measures (CQMs) as part of Meaningful Use requirements, and Electronic Health Records.

Together, these evolving data sources help create a more complete picture of the chronic disease burden in Vermont. The Fellow would work with programs to use the data to help define interventions in clinical and public health settings, and to make recommendations for program design and delivery though a public health lens. There may be opportunities to publish articles regarding innovative pilot projects or health care reform efforts occurring within the state.

Analyze Prenatal Oral Health and Birth Outcomes, including Childhood Asthma:

The Office of Oral Health would like to engage a Fellow on a project looking at the relationship between prenatal care and infant/early childhood health outcomes. Specifically, it would examine data on pregnant women's oral health status and access to prenatal dental care, tobacco use, risk for obesity and obesity-related health issues, and socioeconomic status. Outcomes of interest include low birth weight, dental caries, and asthma. In this project the Fellow would work closely with the Division of Maternal and Child Health, in addition to the HPDP Oral Health, Tobacco, and Obesity Prevention programs.

Participate in the Health Surveillance Survey Review Committee:

The Fellow would be a full participant on the Survey Review Committee that is housed in the Research, Epidemiology and Evaluation Unit. This committee reviews surveys conducted by VDH staff as well as community partners to ensure sound instrument design and to anticipate the needs for data analysis.

Preparedness Role

All VDH staff participate in VDH emergency response activities using an Incident Command System (ICS). Whether in training or in an emergency event, the Fellow can participate actively in a unit of his or her interest. Examples include: emergency communications, GIS mapping, toxicology, and surveillance.

The Fellow will have the opportunity to work directly with his or her primary mentor on a response to an outbreak. This work would be subject to whatever type of outbreak develops within the course of the fellowship. Recent examples include pertussis, Eastern Equine Encephalitis, influenza, and food-borne illness.

Assignment Location:	Vermont Department of Health Burlington, Vermont
Primary Mentor:	Matthew Thomas, PhD Public Health Analyst—Tobacco Epidemiologist
Secondary Mentor:	Jessie Hammond, MPH Public Health Analyst—Behavioral Risk Factor Surveillance System (BRFSS) Coordinator