Chronic Disease

Assignment Description:
The Bureau of Community Health Promotion (BCHP) in the Wisconsin Division of Public Health (DPH) consists of cross-cutting and integrated programs throughout the lifespan: maternal and child health (MCH), including birth defects surveillance, PRAMS, reproductive health, genetics, universal newborn hearing screening, children and youth with special health care needs (CYSHCN); injury and violence prevention; physical activity and nutrition (including WIC); oral health; and chronic disease (tobacco prevention and control, diabetes, heart disease and stroke, arthritis, cancer control, and the Well-Woman breast and cervical cancer screening program).

We have adopted the CDC Healthy People at Every Stage of Life framework: "All people, and especially those at greater risk of health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life." People with disabilities have been identified as a population that experiences health disparities in the State Health Plan, "Healthiest Wisconsin 2020," for the first time. Our state has just begun to explore the relationship between health and disability across the life course, in close collaboration with our partners at the University of Wisconsin – Madison, Waisman Center, and a University Center for Excellence in Developmental Disabilities (UCEDD).

The CSTE fellow will have exposure to all areas of epidemiology and disease surveillance in BCHP, which has more than 10 epidemiologists specializing in a variety of areas of chronic disease and MCH. These individuals, along with students from the University of Wisconsin School of Medicine and Public Health (UWMSPH) and a number of fellows and trainees, make up a learning community that actively contributes to public health workforce development. DHS intentionally supports the experience of learners by organizing learner seminars and facilitating opportunities for learners to connect with peers and experienced public health staff.

The Wisconsin Division of Public Health is located in beautiful Madison, Wisconsin, on the shores of Lake Monona, just 2 blocks from the State Capitol Building and next door to the Frank Lloyd Wright designed Monona Terrace Community and Convention Center. The city consistently ranks as a top community in which to live, is bike-friendly, and has year-round opportunities for outdoor recreation in and around the city. Madison is also home to the University of Wisconsin (including the Schools of Medicine and Public Health, Public Affairs, Law, Pharmacy, Nursing, Veterinary Medicine, and Letters and Sciences), 3 major hospitals, a performing arts center, many museums, diverse and plentiful dining options, a nationally renowned farmer's market, a convenient bus system, a strong school district, and eclectic housing options.

Day-to-Day Activities:
- Participate in the following meetings: DPH Epidemiology/Data Working Group meetings (monthly); Family Health Section meetings (monthly); Chronic Disease Section Meetings (monthly); BCHP-wide meetings (2x/yr); Program Integration meetings (6-10x/yr); Preparedness meetings and trainings (as appropriate)
- Attend weekly progress meeting with mentors (2-4 hr/wk as specified, minimum)
- Attend and make at least 1 presentation in learning sessions with other learners at DPH (medicine, nursing, nutrition, epidemiology, and MPH students and fellows)
- Attend weekly public health seminars at UWSMPH as applicable

- Choose one or more epidemiologic surveillance, program evaluation, or policy development projects and follow it/them from development to investigation to data collection to analysis to report or manuscript completion
- Become comfortable with evidence-based public health, disability as a health disparity, and the life course framework as it relates to MCH, chronic disease, and social justice
- Participate in policy development and implementation
- Opportunities are available to become familiar with database linkage, GIS mapping, and cost-benefit analyses, among other things.

Potential Projects:

HEALTH AND DISABILITY IN WISCONSIN: Although public health has traditionally viewed disability as an undesired health outcome, emerging views recognize that having a disability does not preclude health and wellness. For the first time, Wisconsin's State Health Plan, "Healthiest Wisconsin 2020," includes people with disabilities as a population that experiences health disparities. For example, people with disabilities face unique barriers to preventive health strategies and are at greater risk for preventable chronic health problems. The fellow would have the opportunity to use key datasets (e.g., American Community Survey, the Behavioral Risk Factor Surveillance System, the Wisconsin Family Health Survey, and the National Survey of Children's Health, among others) for data on the health of people with and without disabilities related to health risk behaviors, health outcomes, and health care access and utilization. Key findings would then be incorporated into a final report intended for the public and poised for publication.

DISABILITY, INJURY, AND CHRONIC DISEASE: People with disabilities are at greater risk for preventable injuries and chronic health problems, and conversely, injury and chronic disease are both important causes of disability. The chronic disease program has begun to include people with disabilities in a variety of initiatives including the Wisconsin Well Woman Program, Diabetes Prevention and Control Program, Oral Health Program, and Nutrition and Physical Activity Program. The fellow would have the opportunity to lead continued integration of disabilities into chronic disease activities including data summaries and self-management tools/strategies. Furthermore, the fellow could investigate the relationship between injury and disability. Although people with disabilities are at higher risk of injury, much of this risk can be mitigated by environmental modifications that reduce hazards.

COORDINATED CHRONIC DISEASE PROGRAM: The chronic disease program is participating in a coordinated chronic disease grant, which emphasizes the importance of collaboration across chronic disease conditions/risk factors and the value of shared data management and communication. A variety of crosscutting chronic disease projects could be pursued, including study of the relationship between chronic disease and various risk/protective factors including low birthweight/prematurity, breastfeeding, alcohol consumption, tobacco use, and nutrition/physical activity. The program is also interested in utilizing new communication strategies (e.g., storytelling) to raise awareness and emphasize the impact of chronic disease risk factors throughout the life course.

SURVEILLANCE OF CRITICAL CONGENITAL HEART DISEASE (CCHD): Wisconsin is one of 6 states funded by the CDC to implement a new screening program for CCHD. This 3-year demonstration project (2012 – 2015) is focused on the enhancement of state screening infrastructure, data collection and reporting, and education of various stakeholders on testing methodology and follow-up protocols. In collaboration with the University of Wisconsin School of Medicine and Public Health (UWSMPH) Department of Pediatrics, the Wisconsin Office of Health Informatics, and Wisconsin Children and Youth with Special Health Care Needs (CYSHCN) staff, the fellow would have the opportunity to provide epidemiological

support to the project, help identify key analysis questions and specifications for a comprehensive report (to be completed in 2013), and help assure project integration with the Wisconsin Birth Defects Registry. This system could also serve as the subject for the CSTE fellow's surveillance system evaluation.

BIRTH DEFECTS: Recent studies indicate that the birth prevalence of gastroschisis in Wisconsin has increased over the past two decades, similar to findings in other states and internationally. The fellow would have the opportunity to investigate this trend further using Poisson regression and linked birth certificate/hospital discharge data. This project is well situated for publication.

NEWBORN SCREENING: Wisconsin's newborn blood spot screening program is a comprehensive population-based system that includes screening, diagnosis, disease management, and ongoing evaluation of all system components. The fellow would have the opportunity to provide support on newborn screening epidemiologic matters, including the evaluation of screening and follow-up services, epidemiologic study design, statistical analysis, and policy and program development. The newborn screening program could also serve as the subject of a comprehensive surveillance system evaluation.

ALCOHOL USE: Among all states, Wisconsin has the highest rate of binge drinking. Excessive alcohol consumption is an important risk factor for chronic disease and adverse maternal and child health outcomes. It is also associated with a number of health hazards, including car accidents, injuries, violence, and risk of contracting a sexually transmitted disease. A pilot surveillance project conducted by the UWSMPH Departments of Family Medicine and Pediatrics, and Population Health Institute, examined the incidence of fetal alcohol spectrum disorders (FSAD) in a southeast Wisconsin. The fellow would have an opportunity to collaborate with UW faculty to assist in statewide expansion of that project. Among other things, the project aims to examine whether the needs of the children with FASD are being met, and to identify any barriers to meeting them. Other alcohol-related disease and injury projects could be pursued by examining complementary Division of Public Health datasets.

OTHER DATA ANALYSIS OPPORTUNITIES: The fellow would have the opportunity to use a variety of statistical techniques to study topic areas of interest. For example, a fellow could study the epidemiology of congenital vertebral segmentation defects in collaboration with UWSMPH and state epidemiologists, to identify the relative contribution of suspected risk factors including maternal insulin dependent diabetes mellitus, valproic acid use, hyperthermia, twin gestation, and in vitro fertilization. The fellow could also use multilevel modeling techniques to study the impact of individual- and neighborhood-level factors on the relationship between disability and health care access. The fellow would be encouraged to learn about and utilize a wide variety of analytic skills including geographic information systems (GIS) software (ArcView), data linkage, cost-benefit analysis, and other techniques of interest that can be applied to disability and chronic disease in adults and CYSHCN.

<u>Preparedness Role</u>

The fellow will participate in all ICS training and certification activities and will be assigned a specific role in the event of an incident, such as an environmental spill, pandemic flu outbreak, fire, weather, or other emergency. If interested, the fellow could also identify a preparedness project focusing on special populations, such as people with disabilities, children, CYSHCN, or pregnant women. Periodic table top exercises will also be made available as another good learning tool for preparedness strategies and logistics.

Assignment Location: Madison, WI

Primary Mentor:	Mark Wegner, MD, MPH Medical Director, Chronic Disease Wisconsin Division of Public Health
	Sharon Fleischfresser, MD, MPH Medical Director, Children and Youth with Special Healthcare Needs Program Wisconsin Division of Public Health
Secondary Mentor:	Liz Oftedahl, MPH Epidemiologist Wisconsin Division of Public Health