

Wyoming-Murphy

The Wyoming Department of Health (WDH) is located in Cheyenne, WY, a community of approximately 53,000 people. Wyoming offers abundant outdoor activities, and is composed of mountainous terrain as well as high plains. Wyoming is home to Yellowstone and Grand Teton National Parks. Cheyenne is approximately 90 minutes from Denver, CO and 45 minutes from Ft. Collins, CO.

The fellow will have the opportunity to work in both the infectious disease epidemiology section and the chronic disease epidemiology section. Routine, day-to-day activities will likely emphasize the area of infectious disease epidemiology, with some responsibility for following-up on reported diseases and subsequent investigations as needed. This responsibility for disease follow-up will be guided by the fellow's interests and comfort level with the subject matter. At times these activities will lead to participation in on-site field investigations, and it is expected the fellow will serve as the lead investigator in some investigations. The fellow will also participate in rotating coverage of the department's 24 hour urgent hotline which receives calls from the public and healthcare providers regarding issues deemed by the caller to be urgent. These calls are often infectious disease or environmental health oriented. It is anticipated that these day-to-day activities will lead to further in-depth epidemiologic studies on a wide variety of topics (examples of this occurring recently include a study on the epidemiology of tularemia which revealed an interesting shift in the modes of transmission, a West Nile virus serosurvey of ~900 people that assessed the significance of certain symptoms and the percentage of infections that were symptomatic due to WNV, and a brucellosis serosurvey of individuals in high risk occupations).

The Wyoming Department of Health has an active Public Health Preparedness Program and we anticipate the opportunity for the fellow to participate in preparedness planning and trainings if desired. In addition, several of the possible bioterrorism agents are zoonotic diseases that occur naturally in Wyoming, so there is ample opportunity for the fellow to participate in follow-up of these interesting diseases.

A potential project in the area of infectious disease epidemiology is to perform an epidemiologic assessment of methicillin-resistant *Staphylococcus aureus* (MRSA) to determine the extent of community-acquired MRSA (CA-MRSA) in Wyoming. CA-MRSA is reportable in Wyoming, and the CDC has established some guidelines to help in classifying a case of MRSA as CA-MRSA, however we suspect it is extremely under-reported in Wyoming. Having a better understanding of the extent of CA-MRSA in Wyoming would help in educating healthcare providers as to the proper diagnosis and care of skin and soft tissue infections.

The fellow will also have the opportunity to be involved in analytic studies of a chronic disease nature. The chronic disease section of the WDH includes cancer surveillance and early detection programs, cardiovascular disease prevention programs, and diabetes education, prevention, and care programs. The State of Wyoming is in the process of implementing a comprehensive cancer plan, and a possible project for the fellow is analyzing available cancer data to guide implementation of the plan, possibly by looking at variables such as incidence, death rates, stage at diagnosis, and geographic region, among others. In addition, a system will need to be developed that allows for tracking of epidemiologic data to monitor the effectiveness of the comprehensive plan. Other proposed projects in the chronic disease section include doing an

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epidemiologic assessment of various cancers in Wyoming, such as lung, breast, colorectal, prostate, or childhood cancer. Such an epidemiologic assessment could help guide resource allocation and provide a basis for prevention messages.

Opportunities for surveillance system evaluations may include infectious disease reporting systems, cancer and chronic disease systems, and maternal-child health systems.

Assignment Location: Cheyenne, WY

Primary Mentor: Tracy Murphy, MD
State Epidemiologist

Advanced Degrees: MD, University of Kansas School of Medicine (1993)

Secondary Mentor: Joseph Grandpre, PhD, MPH
Deputy State Epidemiologist

Advanced Degrees: PhD, University of Arizona (1999)
MPH, University of Arizona (1998)