

Infectious Disease

The mission of the Notifiable Diseases Epidemiology Section (NDES), Georgia Division of Public Health (DPH), is to improve the health of Georgians by preventing the spread of infectious diseases and mitigating their effects based on epidemiologic principles and methods. The 30 highly trained and skilled public health professionals of NDES: (1) conduct statewide notifiable infectious and vectorborne disease surveillance and innovative syndromic and sentinel surveillance activities; (2) provide expert and technical support to the 18 Georgia district public health departments and communities in disease outbreak investigations, public health emergency preparedness and response, and develop and evaluate public health policies and clinical guidelines; and (3) publish and disseminate public health information to public and private partners and constituents.

The CSTE Applied Epidemiology Fellowship position in NDES is supported by physician-, veterinarian-, and public health emergency preparedness-epidemiologists; statisticians; and program managers and will focus on evaluating, analyzing, and enhancing syndromic surveillance (SS) activities in the state. SS supplements existing surveillance such as laboratory surveillance by providing earlier detection and awareness of outbreaks or disease trends of public health significance for timelier public health response (<http://cdc.gov/ncidod/eid/vol9no10/03-0231.htm>). NDES is one of the innovative leaders in advancing SS in public health and the CSTE Fellow will have opportunities to apply his or her analytic and communication skills to evaluate validity, timeliness, and usefulness of the state's SS system in Georgia hospital emergency departments. In addition, the CSTE Fellow will have opportunities to conduct community and health district needs assessments to improve the applicability and outcome of SS in Georgia; develop strategies to develop and implement education and training in Georgian communities to optimize the benefits of SS in public health practice; participate in outbreak investigations; assist in improving and enhancing public health preparedness by providing epidemiologic principles, skills, experiences to DPH partners and stakeholders across the state.

Depending on the interest of the CSTE Fellow affiliated with the State, he or she could also collaborate with epidemiologists and subject matter experts at different levels of public health organizational structure, including the Centers for Disease Control and Prevention (CDC), GA Public Health Districts, and County Health Departments. Within DPH, the CSTE Fellow can work on short-term assignments with environmental health, chronic disease, and other epidemiology units, and public health emergency preparedness programs. The CSTE Fellow will have ample opportunities to present and publish his or her work on national and local forums, including his or her work on the following potential projects:

- Leading a systematic evaluation of the Georgia hospital emergency department-based SS by: (1) reviewing the data collected by the system since its implementation in 2005 to generate a comprehensive report (descriptive epidemiology); (2) identifying variables and thresholds needed to detect community outbreaks of biological or chemical terrorism agents (<http://www.cdc.gov/ncidod/eid/vol9no10/03-0231.htm>); (3) modeling the above

variables and thresholds and applying it to the aggregate or select portions of SS data to hypothesize sensitivity and specificity of SS to detect anomalies and outbreaks, and describe the relevance and validity of the system; and, perhaps most importantly, (4) implementing the CSTE Fellow's initiative, creativity, and public health acumen to find other ways to critically evaluate the system

- Evaluate the use of hospital emergency department-based SS as a tool for influenza surveillance by comparing respiratory illness syndromes in SS to the Georgia Sentinel Provider Influenza Surveillance data
- Conduct an analysis of the 2006 emergency department data from a Georgia hospital to validate the SS data captured by the system with the actual patient records
- Establish and characterize the baseline magnitude and trends of select syndromes and describe SS alert notification patterns and their implications for public health practice [e.g., changes in respiratory syndromes recorded associated with the 2007 wildfires in south Georgia
(http://www.georgia.gov/00/article/0,2086,4802_4961_86323727,00.html)]
- Describe outcomes of the “upstream,” first encounter SS reports in the “downstream,” laboratory-confirmed Georgia State Electronic Notifiable Disease Surveillance System database and their capacity for early detection of notifiable diseases
- Assess public health implications associated with student nurse visits and absenteeism in a 30-school, 22,000-student public school district in metropolitan Atlanta (e.g., student compliance with do-not-come-to-school directive for public health reasons)
- Describe the epidemiology of physician-evaluated and laboratory-confirmed intestinal parasitic infections identified among and effectiveness of pharmaceutical interventions provided to refugee populations in a metropolitan Atlanta county health department
- Conduct a statewide district epidemiologist and emergency planner needs assessment for illness and injury surveillance in their communities to identify and bridge gaps between epidemiologists and emergency planners

Assignment Location:

Atlanta, GA

Primary Mentor:

David Kim, MD
Career Epidemiology Field Officer
CDC Assignee
Division of Public Health
Georgia Department of Human Resources

Advanced Degrees:

MD, University of Colorado, Denver (1992)
MA, Colorado College (1985)

Secondary Mentor:

Cherie Drenzek, DVM, MS
Chief, Notifiable Diseases Epidemiology
Division of Public Health
Georgia Department of Human Resources

Advanced Degrees:

DVM, Michigan State University (1995)
MS, Wayne State University (1988)