

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES
CLASS SPECIFICATION

EPIDEMIOLOGY RESEARCH AND INVESTIGATION SCIENTIST

POSITION CODE: 13833
Effective: 06/01/2015

DISTINGUISHING FEATURES OF WORK:

Under administrative direction, identifies epidemiologic research and investigation needs; utilizes scientific methods to formulate hypotheses; develops and carries out a plan of action to test these hypotheses; analyzes and interprets results and prepares reports of these findings. Trains and instructs others in the principles and practice of epidemiologic investigation and biostatistics analysis; serves as a technical consultant to other programs and local health departments.

ILLUSTRATIVE EXAMPLES OF WORK:

1. Expands current knowledge of the issues of public health importance; provides data and defines programmatic corrective actions to alleviate adverse health effects; evaluates outcomes and proposes practices or policies that will promote and protect public health based on epidemiologic analysis.
2. Conducts complex or specialized work assignments; ensures the scientific validity of the projects, and consults on analyses and conclusions; provides advice on work methods, practices and procedures; assists in identifying the parameters of viable solutions.
3. Designs, conducts and directs epidemiologic studies and urgent investigations; leads the development and conduct of epidemiologic studies in order to address important and practical public health problems and to plan programs; oversees the design and use of databases for the analysis of health problems; designs and manages the surveillance systems for diseases which are of public health importance. Oversees the design and implementation of instruments for the collection of surveillance information and data; develops methods for, and conducts advanced descriptive and comprehensive analysis of, surveillance data for multiple purposes. Ensures that surveillance systems are designed to include groups subject to health disparities or other potentially underrepresented groups; synthesizes principles of good ethical and legal practice for application to study design, data collection, dissemination and use.
4. Conducts and oversees literature reviews for the design of programs and the preparation of publications, and to assist in the planning and evaluation. Designs, prepares and reviews reports from analysis of epidemiologic or biostatistics surveillance data, literature reviews and other information and orally presents to diverse audiences. Reviews and prepares responses to requests for information; develops and provides recommendations to officials about the control of disease and injury problems on the basis of the results of surveillance, field investigations, public health research, laboratory tests and acceptable methods of control; formulates new interventions on the basis of evidence, when available.

EPIDEMIOLOGY RESEARCH AND INVESTIGATION SCIENTIST (continued)

5. Serves as a recognized scientific consultant and expert on epidemiologic issues or critical problems, where the type of resources provided and the impact on communities is extensive, so that the program requires application of advanced scientific and technical methods and practices. Provides and reviews technical assistance to communities and outside partners with respect to surveillance and other epidemiologic data and evaluation. Works as a liaison to outside data-generating entities to develop and maintain partnerships for sharing and using data.
6. Supports implementation of strategies to control diseases in targeted groups, as necessary. Reviews, conducts and designs methods for literature reviews and data analyses to evaluate program progress and effectiveness. Formulates policies and procedures, and plans for the conduct of existing and new subprograms in epidemiologic control and assessment.
7. Participates in writing grants and other funding proposals with respect to surveillance, epidemiology and program evaluation; reviews applications for scientific integrity and accuracy; serves as principal investigator for research grants. Develops and evaluates methods of training about appropriate epidemiologic and biostatistics methods.
8. Performs other duties as required or assigned which are reasonably within the scope of the duties enumerated above.

DESIRABLE REQUIREMENTS:

Education and Experience

Requires a doctoral degree in the field of epidemiology or biostatistics.

Knowledge, Skills and Abilities

Requires extensive knowledge of applied epidemiology.

Requires working knowledge of computers and statistical software programs, which are designed to support the implementation and the use of state of the art epidemiologic and biostatistics analysis.

Requires ability to design sound epidemiologic studies, with respect to the formulation of testable hypotheses, the selection of appropriate sites or populations, the calculation of a needed sample size or statistical power and the development of a study protocol, based upon the input from stakeholders.

Requires ability to conduct responsible, independent applied epidemiologic research and to recommend epidemiologic methods to increase the capability of the agency's disease prevention and control programs.

Requires ability to communicate clearly and effectively, both orally and in writing, and develop cooperative working relationships with management, staff, members of governmental agencies and representatives of the industry.

Requires ability to prepare scientific articles and present and explain the results of complex investigations and research to a lay audience, as well as a scientific audience.

May require the possession of an appropriate valid driver's license and/or the ability to travel.