



**Epidemiologist 1**  
**Epidemiologist 2**  
**Epidemiologist 3**

**6216**  
**6217**  
**6218**

## **CLASS SERIES CONCEPT AND RESPONSIBILITIES**

The EPIDEMIOLOGIST plans, develops, conducts and prepares reports on epidemiological studies and provides consultation to others on population health problems and prevention.

Epidemiological studies include investigations of outbreaks, performance of formal case control, cohort studies of significant health issues and surveillance of health problems. Employees determine the most appropriate way to study an identified health question. Plan the epidemiologic study of the question, including identification of the study population, questionnaire design, analytical design, identification and organization of resources needed and writing a specific project proposal. Conduct the epidemiological study, including training interviewers and clerical staff in project specific tasks as necessary, identifying subjects from whom biological specimens are to be obtained, assuring quality control of the data collection and data entry and performing the analysis of the data. Prepare formal written and oral reports of the study, including a description of the methods used, the findings and the interpretation of the findings.

Employees provide technical assistance and consultation to lower level staff, local health department staff members or staff from other programs in the agency or from other state agencies in the planning, conducting and analyzing of outbreak investigations, formal case control and cohort studies of significant health issues and surveillance of health problems.

## **DISTINGUISHING FEATURES**

This is a three-level, professional class series.

The responsibilities within the Concept and Distinguishing Features are characteristic of the type and level of work associated with these classes. Individual positions may do all or some combination of the responsibilities listed as well as other related responsibilities.

### **Level 1**

The EPIDEMIOLOGIST 1 is the first of this professional, three-level series. Clear and diversified procedures, precedents and professional standards govern judgment used to select the appropriate solutions. Employees have readily available professional leadership or managerial supervision.

Under general direction, the Epidemiologist 1 conducts and prepares reports on epidemiological studies and provides consultation and assistance to others in the planning, development and conduct of such studies. Employees provide training in general epidemiologic methods as well as in specific project tasks to local health department staff members and staff from other programs in the agency and from other state agencies. They participate in committees devoted to health issues related to the program area and make formal presentations of study findings to scientific groups, health care providers, agency personnel and the general public.

The Epidemiologist 1 is distinguished from the next higher level by the lack of responsibility for coordinating the work of other epidemiologists, serving as a project leader, and absence of professional level subject area expertise. Although employees in this class are expected to carry-out studies, they may receive technical advice on approaches to non-routine problems.

### **Level 2**

The EPIDEMIOLOGIST 2 is the second and journey level of this professional, three-level series. They plan, develop, conduct and prepare reports on epidemiological studies, coordinate the work of staff involved in such studies or provide consultation and assistance to others in the planning, development and conduct of such studies.

At this level, employees plan staff assignments for specific epidemiologic studies. Establish timetables for completion of study components. Review, evaluate and approve tasks completed by project staff. Develop and implement procedures for quality control measures to be carried out by staff. Evaluate staff performance through participation in performance appraisals.

They provide guidance to students of medicine and nursing, epidemiology students and medical residents and interns assigned to the agency for work study experience in epidemiology. Training is provided in general epidemiologic methods and specific project tasks to local health department staff members and to staff from other programs in the agency and other state agencies.

They write proposals to seek grants from federal and other funding sources. Establish relationships and coordinate collaborative efforts with epidemiologic investigators in other agencies. Relate epidemiologic findings to health policy formulation. Participate in committees devoted to issues related to the program area and make formal presentations of study findings to scientific groups, health care providers, agency personnel and the general public.

The Epidemiologist 2 is distinguished from the lower level by the responsibility to coordinate work of other epidemiologists, serving as a project leader or conducting technical aspects of the work without consultative assistance. It is distinguished from the next higher level by the absence of responsibility to represent the state on national, regional, or multi-state public health issues and by the lack of responsibility to assist in tactical planning or program development for new solutions and absence of subject area expertise.

### **Level 3**

The EPIDEMIOLOGIST 3 is the third and advanced professional level of this three-level series. They provide consultation and training on population based health indicators or disease and injury prevention and plan, conduct and prepare reports on population health or other epidemiological studies. Provide expertise in the design, management and evaluation of study protocols and health status questionnaires, sample selection and analysis. Coordinate public health programs, including statistical analysis, health care planning, surveillance systems and public health improvement.

At this level, employees validate identification of public health problems pertinent to the population. Design investigations of acute and chronic conditions or other adverse outcomes in the population and synthesize principles of good ethical/legal practice for application to study design and data collection, dissemination and use. Manage data from surveillance, investigations or other sources. Evaluate data from an epidemiologic investigation or study. Evaluate results of the analysis and interpret conclusions. Formulate new interventions on the basis of evidence when available and control measures in response to epidemiologic findings.

They apply basic public health sciences to public health practice. Use current knowledge of causes of disease to guide epidemiologic practice. Develop processes for using laboratory resources to support epidemiologic activities. Apply principles of informatics, including data collection, processing and analysis in support of epidemiologic practice. Develop and manage information systems to improve effectiveness of surveillance, investigation and other epidemiologic practices.

They organize preparation of written and oral reports and presentations that communicate necessary information to professional audiences, policymakers and the general public. Use effective communication technologies. Provide guidance to students of medicine, nursing and epidemiology as well as medical residents and interns assigned to the agency for work study experiences in epidemiology. Provide training in general epidemiologic methods as well as in specific project tasks to local health department staff members and staff from other programs in the agency and from other state agencies.

At this level, employees lead epidemiologic studies, public health programs and community public health planning processes at the state, local or tribal level. Develop community partnerships to support epidemiologic investigations. Participate in intra- and inter-agency committees regarding population based health concerns,

disease and injury control. Give formal presentations to general public groups and respond to inquiries from the news media as needed.

The Epidemiologist 3 is distinguished from the lower levels by representing the state on national, regional or multi-state public health issues and serving as a subject matter expert to develop statewide guidelines, policies, procedures and implementation strategies for population-level prevention of public health issues. This level may require proficiency in conducting advanced statistical analysis. It also designs and delivers training to lower level Epidemiologists, staff and stakeholders.

This level is further distinguished by the assignment to assist in tactical planning or program development, including the definition of problems and new solutions. Employees have the independence needed to achieve operating objectives consistent with managerial direction, operating budgets, operating plans, objectives and functional policies and precedents. Management direction establishes expected results.

## **MINIMUM QUALIFICATIONS AND SKILLS**

### **Epidemiologist 1**

A Master's degree in Community Public Health, Epidemiology, Research Analyst or a closely-related field AND one year of epidemiologic, community health or research analysis experience; **OR**

A Bachelor's degree in Community Public Health, Epidemiology or a closely-related field AND two years of epidemiologic or community health experience; **OR**

A non-epidemiology professional degree or certification (e.g., Registered Nurse (RN), Doctor of Medicine (MD), Doctorate of Philosophy (PhD), Doctor of Osteopathic Medicine (DO), Doctor of Dental Surgery (DDS), Doctor of Dental Medicine (DMD) or Doctor of Veterinary Medicine (DVM) with specific epidemiology training (e.g., Master of Public Health (MPH) degree, Center for Disease Control (CDC) or Epidemic Intelligence Service program) AND one year of epidemiological, community health or research analysis experience.

#### **Knowledge and Skills:**

Knowledge of the principles and methods of epidemiology, including study design, analytical procedures and interpretative methods.

Knowledge of the principles and methods of biostatistics and demography.

Knowledge of the methods of preparing written scientific reports.

Knowledge of methods of managing and analyzing data by computer.

Knowledge of the principles and methods of population health surveillance.

Knowledge of medical terminology and health information related to the general area of responsibility.

Skill in organizing the conduct of an outbreak investigation or other epidemiologic study.

Skill in monitoring data collection and data entry to assure quality control.

Skill in applying routine biostatistical techniques to the analysis of epidemiologic data.

Skill in evaluating epidemiologic data to develop valid interpretations of the data.

Skill in working with a variety of people with differing levels of technical knowledge to achieve efficient and reliable completion of epidemiologic studies.

Skill in the design and maintenance of surveillance systems to monitor the occurrence of disease or other health events.

Skill in writing scientific reports of investigations and special studies.

Skill in presenting training on technical subject matter.

Skill in use of computer graphic and statistical analysis programs.

Skill in program development.

Skill in grant writing.

## **Epidemiologist 2**

A Bachelor's degree in Community Public Health, Epidemiology, Research Analyst or a closely related field AND four years of epidemiological, community health or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role; **OR**

A Master's degree in Community Public Health, Epidemiology, Research Analyst or a closely related field AND three years of epidemiological, community health, or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role; **OR**

A non-epidemiology professional degree or certification (e.g., Registered Nurse (RN), Doctor of Medicine (MD), Doctorate of Philosophy (PhD), Doctor of Osteopathic Medicine (DO), Doctor of Dental Surgery (DDS), Doctor of Dental Medicine (DMD), or Doctor of Veterinary Medicine (DVM) with specific epidemiology training (e.g., Master of Public Health (MPH) degree, Center for Disease Control (CDC) or Epidemic Intelligence Service program) AND two years of epidemiological, community health or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role.

### **Knowledge and Skills (in addition to those listed in level 1):**

Knowledge of basic management methods.

Skill in planning the conduct of outbreak investigations or other epidemiologic studies.

Skill in the design and maintenance of surveillance systems to monitor the occurrence of disease or other health events.

Skill in designing survey questionnaires.

Skill in public speaking.

Skill in using resource materials and libraries.

Skill in using electronic data base retrieval systems.

Skill in creating, maintaining and using files and public records.

## **Epidemiologist 3**

A Bachelor's degree in Community Public Health, Epidemiology, Research Analyst or a closely related field AND five years of epidemiological, community health or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role; **OR**

A Master's degree in Community Public Health, Epidemiology, Research Analyst or a closely related field AND four years of epidemiological, community health or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role; **OR**

A Doctorate's degree in Community Public Health, Epidemiology, Research Analyst or a closely related field AND three years of epidemiological, community health or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role; **OR**

A non-epidemiology professional degree or certification (e.g., Registered Nurse (RN), Doctor of Medicine (MD), Doctorate of Philosophy (PhD), Doctor of Osteopathic Medicine (DO), Doctor of Dental Surgery (DDS), Doctor of Dental Medicine (DMD), or Doctor of Veterinary Medicine (DVM) with specific epidemiology training (e.g., Master of Public Health (MPH) degree, Center for Disease Control (CDC) or Epidemic Intelligence Service program) AND four years of epidemiological, community health or research analysis experience of which one year must have been in a supervising, lead worker or project leadership role.

**Knowledge and Skills (in additional to those listed in level 1 and 2):**

Knowledge of the advanced principles and methods of epidemiology, including study design, analytical procedures and interpretative methods.

Knowledge and expertise in a particular domain of epidemiology (e.g., chronic disease, Communicable Disease, Maternal and Child Health, Injury, Environmental Health, etc.)

Skill in planning and organizing epidemiologic studies.

Skill in communicating highly technical information concisely and clearly to a variety of health professionals in consultation and formal training settings.

Skill in gathering facts, interpreting them and making recommendations based upon those facts.

Skill in applying advanced biostatistical techniques to the analysis of epidemiologic data.

Skill in writing scientific reports of investigations and special studies.

Skill in using and managing electronic data systems.

**NOTE:** The KNOWLEDGE and SKILLS (KS) are required for initial consideration. Some duties performed by positions in this class may require different KS. No attempt is made to describe every KS required for **all** positions in these classes. Additional KS requirements will be explained on the recruiting announcement.

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