

Sample Position Description for Tier 2: Mid-Level Epidemiologist

Introduction

Incumbent serves as an intermediate-level professional epidemiologist, responsible for carrying out a broad and complex range of investigative and analytical epidemiologic activities related to the surveillance, detection, and prevention of diseases and injuries. Incumbent works independently or as an experienced team or project member, providing epidemiologic expertise for specific programs or more complex individual epidemiologic analyses. This level of epidemiologic work includes developing and designing methods of collecting, analyzing, and disseminating data and requires general — and in some cases specific — understanding of program processes and methods for prevention, intervention, and control of diseases of public health importance.

Major Duties and Responsibilities

The purpose of this position is to conduct epidemiologic investigations used in the prevention and control of communicable or chronic diseases, injuries, and other health conditions and in the planning of health programs. Investigations are designed to identify, analyze, and report public health issues and problems, resulting in improved monitoring of health status and its correlates, identification of trends or outbreaks of diseases or other adverse health events, provision of data and information about corrective actions or programs to alleviate adverse health effects, and proposal of practices or policies based on such data and information that will promote and protect public health.

1. Conduct of Epidemiologic Investigations

Plans and conducts epidemiologic studies and urgent outbreak investigations to address important and practical public health problems and to plan programs.

Participates in the planning of epidemiologic investigations. Identifies and evaluates a wide range of health conditions within an assigned program area to recognize public health problems pertinent to the population and to determine feasibility and approach to epidemiologic investigation. Collaborates with scientists in the survey or investigation design process, including conducting a search or review of existing literature and data in a scientific area, determining methodological techniques and processes, and designing questionnaires and other data-collection instruments. Designs, manipulates, and uses databases for analysis of health problems to assess the potential public health impact.

Conducts epidemiologic outbreak investigations; performs onsite review of facilities and procedures; interviews patients, health care providers, and others involved; and collects data from local agencies or other health entities.

Performs statistical analyses related to complex analytical investigations involving highly specialized scientific data. In addition to using known techniques for analyzing epidemiologic investigation data, adapts or combines a variety of existing statistical methods to fulfill specific project needs. Designs, manipulates, and utilizes databases for analysis of health problems. Uses surveillance systems to collect disease or health outcome data. Generates descriptive analyses of surveillance data for a variety of audiences.



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2. Participation in Surveillance Activities

Participates in the design, management, and use of surveillance systems for diseases of public health importance. Identifies program surveillance data needs, designs instruments for the collection of surveillance information and data, and implements new or revises existing surveillance systems.

Conducts advanced descriptive and comprehensive analyses (e.g., simple regression, stratified analyses to control for confounding, adjusted odds ratios, and relative risks) of surveillance data for multiple audiences. Reports key findings and performs evaluations of the surveillance system.

3. Provision of Epidemiologic Consultation on Scientific and Technical Issues

Provides scientific advice and technical assistance to communities and outside partners with respect to surveillance and other epidemiologic data and evaluation expertise. Effective advice and assistance requires the application of program and epidemiologic expertise to complex public health issues, with an understanding of the appropriate cultural/social/political framework, as well as the ethical/legal issues related to epidemiologic data collection, dissemination, and use.

Consults on technical problems where solutions may not conform to established protocols and may require the modification of approaches or applications in a specialty area. Provides epidemiologic advice and assistance in the resolution of technical issues that include significant barriers to program or project delivery.

Provides consultative services on large and difficult programs or projects that have unusually demanding technical problems or issues.

4. Development and Dissemination of Data and Epidemiologic Findings

Conducts literature reviews for program planning, for preparation of publications, and for evaluation. Designs and prepares reports from analyses of surveillance data, literature reviews, and other information. Makes oral presentations to diverse audiences.

5. Participation in Administrative and Program Projects and Activities (related to technical, scientific, and programmatic expertise)

Participates in writing grants and other funding proposals and develops requests for proposals and contracts for data analysis and evaluation projects. Participates on internal and external committees and workgroups related to areas of expertise. Participates in program evaluation, conducts literature reviews, designs methods, and analyzes data to evaluate program progress and effectiveness. Coordinates state program planning efforts with respect to surveillance and other epidemiologic data and evaluation. Develops and conducts training for local staff in the conduct of investigations and appropriate methods of controlling diseases and preventing injuries.

6. Exercise of Technical Leadership

May provide technical leadership and guidance and coordinate work of Tier 1 Epidemiologists, other professional staff, or technical and administrative staff, as assigned.

7. Performance of Other Duties as Assigned

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Supervision Received

Initially works under the close supervision of a senior epidemiologist (Tier 3a or Tier 3b) or other employee of higher grade; works more independently with acquired experience. The supervisor sets the overall objectives and determines resources available. Incumbent and supervisor, in consultation, develop guidelines, projects, and work to be done. Incumbent plans, directs, monitors, evaluates and identifies needs and resolves most conflicts within assigned projects. Incumbent interprets and applies policies in terms of established goals, objectives, and accepted practices. Controversial or unprecedented issues are brought to the attention of the supervisor or Senior Scientist for more detailed direction and guidance. Incumbent keeps the supervisor or Senior Scientist informed of progress and potentially critical items. Completed work is reviewed for feasibility, conformance to program policy and practices, and effectiveness in meeting specific goals and objectives.

Applied Epidemiology Competencies – Work Applications

The Tier 2 Epidemiologist is expected to have strengths in several of the skill domains enumerated below. Under the direction of a senior epidemiologist, the Tier 2 Epidemiologist may be expected to learn, demonstrate, and attain the following skills¹, as appropriate to his or her position:

1. Perform Epidemiologic Assessment and Analysis
 - A. Identify public health problems pertinent to the population
 - B. Conduct surveillance activities
 - C. Investigate acute and chronic conditions or other adverse outcomes in the population
 - D. Apply principles of good ethical/legal practice as they relate to study design and data collection, dissemination, and use
 - E. Manage data from surveillance, investigations, or other sources
 - F. Analyze data from an epidemiologic investigation or study
 - G. Summarize results of the analysis and draw conclusions
 - H. Recommend evidence-based interventions and control measures in response to epidemiologic findings
 - I. Evaluate programs
2. Apply Basic Public Health Sciences to Public Health Practice
 - A. Use current knowledge of causes of disease to guide epidemiologic practice
 - B. Use laboratory resources to support epidemiologic activities
 - C. Apply principles of informatics, including data collection, processing, and analysis, in support of epidemiologic practice
3. Use Effective Communication Strategies
 - A. Prepare written and oral reports and presentations that communicate necessary information to professional audiences, policy makers, and the general public
 - B. Demonstrate the basic principles of risk communication
 - C. Incorporate interpersonal skills in communication with agency personnel, colleagues, and the public
 - D. Use effective communication technologies
4. Integrate Community Dimensions into Epidemiologic Practice
 - A. Provide epidemiologic input into epidemiologic studies, public health programs, and community public health planning processes at the state, local, or tribal level
 - B. Participate in development of community partnerships to support epidemiologic investigations
5. Work in a Culturally Competent Manner
 - A. Describe population by race; ethnicity; culture; societal, educational, and professional backgrounds; age; gender; religion; disability; and sexual orientation
 - B. Establish relationships with groups of special concern (e.g., disadvantaged or minority groups, groups subject to health disparities, historically underrepresented groups)
 - C. Design surveillance systems to include groups subject to health disparities or other potentially underrepresented groups (using standard categories where available)
 - D. Conduct investigations using languages and approaches tailored to the population
 - E. Use standard population categories or subcategories when performing data analysis
 - F. Use knowledge of specific sociocultural factors in the population to interpret findings
 - G. Recommend public health actions that would be relevant to the affected community

¹ From the CDC/CSTE Competencies for Applied Epidemiologists in Governmental Public Health Agencies (AECs). For more information visit www.cste.org/competencies.asp or www.cdc.gov/od/owcd/cdd/aec/.

Sample Position Description for Tier 2: Mid-Level Epidemiologist

6. Support Financial and Operational Planning and Management of the Program
 - A. Conduct epidemiologic activities within the financial and operational plan of the agency
 - B. Assist in developing a fiscally sound budget that will support the activities defined in the operational plan and is consistent with the financial rules of the agency
 - C. Implement operational and financial plans
 - D. Assist in preparation of proposals for extramural funding
 - E. Use management skills
 - F. Use skills that foster collaborations, strong partnerships, and team-building to accomplish epidemiology program objectives

7. Develop and Support Leadership and Systems Thinking
 - A. Support the epidemiologic perspective in the agency strategic planning process
 - B. Promote the organization's vision in all programs and activities
 - C. Use performance measures to evaluate and improve epidemiology program effectiveness
 - D. Promote ethical conduct in epidemiologic practice
 - E. Promote workforce development
 - F. Prepare for emergency response

8. Bring Epidemiologic Perspective in the Development and Analysis of Public Health Policies

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Recommended Qualification Requirements

Education and experience:

- A master's degree with a focus in epidemiology and ≥ 2 years' work experience in epidemiology in a public health agency

OR

- A doctoral-level degree in epidemiology

OR

- Other non-epidemiology graduate degree or certification (e.g., RN, MD/DO, DDS/DMD, DVM, PhD, RS) with specific epidemiology training (e.g., MPH degree, CDC Epidemic Intelligence Service or CSTE Applied Epidemiology Fellowship)

OR

- At least 4 years' experience performing epidemiologic work under the guidance of a Tier 3 Epidemiologist

Special Requirements That May Apply:

- Incumbent must be willing to receive immunizations for communicable diseases, as necessary and appropriate.
- Incumbent may be required to gain security clearance with local, state, and federal agencies for emergency preparedness.
- Incumbent may be required to travel.

Career Progression

The next higher class in this career series is Tier 3 Epidemiologist (3a. Supervisor or Manager or 3b. Senior Scientist/Subject Area Expert).