

Sample Position Description for Tier 3b: Senior Scientist/Subject Area Expert

Introduction

Incumbent serves as a senior or lead epidemiologist providing expert epidemiologic, scientific, and technical leadership in designing and conducting epidemiologic investigations. The duties described in this position encompass advanced professional analytical work in the surveillance, detection, research, and prevention of diseases and injuries. Work involves overseeing and conducting advanced-level professional epidemiologic work by developing and designing methods of collecting, analyzing, and disseminating data and performing appropriate research in areas important to public health. Incumbent performs advanced and specialized professional work, including extensive applied research in a specific field, such as chronic disease, infectious disease, maternal and child health, environmental health, injury clusters, trend analysis, geographic distribution of disease, or other specific epidemiology program area.

Major Duties and Responsibilities

The purpose of this position is to lead scientific investigations within major epidemiology programs, expand current knowledge of issues of public health importance, provide data and define programmatic corrective actions to alleviate adverse health effects, and propose practices or policies that will promote and protect public health. Work requires considerable independent judgment and advanced knowledge of applied epidemiology for public health practice and research. Advanced knowledge of surveillance and study design is essential for both research and management functions.

1. Leadership of Scientific Teams

Serves as a team leader, performing a full range of coordinating and supportive duties and responsibilities and ensuring the work of the team is carried out. Also, personally conducts the most complex or specialized work assignments. Oversees the work of epidemiologists and research analysts by making and reviewing work assignments, establishing priorities, coordinating activities, and resolving related work problems.

Recommends the amount of resources devoted to particular projects or allocated among program segments. Communicates assignments, projects, problems to be solved, events, milestones, program issues under review, and deadlines and timeframes for completion to the team. Ensures the scientific validity of team member projects and consults on analyses and conclusions.

Plans, organizes, and assigns administrative details.



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Coaches the team in the selection and application of appropriate problem-solving methods and techniques; provides advice on work methods, practices and procedures; and assists the team and individual members in identifying the parameters of viable solutions.

Identifies, distributes, and balances workload and tasks among employees; adjusts the workload in accordance with established priorities to ensure timely accomplishment of assigned team tasks; and ensures employees have an integral role in developing the final team product.

Monitors and reports on the status and progress of work, checking on work in progress and reviewing completed work to ensure the supervisor's instructions on work priorities, methods, deadlines, and quality have been met.

Reviews completed work for accuracy and completeness. Reviews and approves the substance of reports and other actions/documents to ensure they accurately reflect the policies and position of the organization.

Contributes information to employee performance reviews of epidemiologists and other staff under scientific oversight. Participates in the selection and assignment of epidemiology and other professional staff. Provides or arranges for specific administrative or technical training necessary to accomplish individual and team tasks.

2. Conduct of Epidemiologic Investigations

Plans, conducts, and directs epidemiologic studies and urgent outbreak 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 analysis of health problems. Designs and manages surveillance systems for diseases 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 analyses of, surveillance data for multiple purposes.

3. Dissemination of Program Data, Information, and Findings

Conducts and oversees literature reviews for design of programs, preparation of publications, and planning and evaluation. Designs, prepares, and reviews reports from analyses of surveillance data, literature reviews, and other information. Orally presents to diverse audiences. Reviews and prepares responses to requests for information.

Develops and provides recommendations to high-ranking 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.

4. Provision of Epidemiologic Consultation on Scientific and Technical Issues

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.

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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.

5. Provision of Program Administration and Support

Supports overall program planning and implementation of strategies to control diseases in targeted groups, as necessary. Directs state program planning efforts with respect to surveillance and other epidemiologic data collection and evaluation. Reviews, conducts and designs methods for literature reviews and data analyses to evaluate program progress and effectiveness.

Formulates policies, procedures, and plans for the conduct of existing and new subprograms in epidemiologic control and assessment.

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 for health care providers and local staff about appropriate methods of controlling diseases and preventing injuries.

6. Performance of Other Duties as Assigned

Supervision Received

Works under limited supervision from the Epidemiology Department Head or other employee of higher grade who delegates team leader's responsibility for actions, decisions, and technical advice provided in epidemiologic matters. Incumbent performs assignments independently, making determinations about scope and direction of research and investigation. Completed work is considered technically authoritative and usually is accepted without significant change and without technical supervision. Review generally is limited to evaluating the effects on the overall epidemiologic studies program.

Identifies research and investigation needs; formulates hypotheses; develops and carries out a plan of action; analyzes and interprets results; and prepares reports of findings. Keeps the supervisor informed of general plans and progress of the work. The supervisor makes final decisions about the direction of the work, changes in research direction, and major investments of time and equipment. Completed work is reviewed to evaluate overall results.

Applied Epidemiology Competency – Work Applications

The Tier 3b Epidemiologist is expected to have significant strengths in many of the skill domains enumerated below. Under limited guidance, the Tier 3B Epidemiologist may be expected to learn, demonstrate, and attain the following skills¹, as appropriate to his or her position:

1. Lead Epidemiologic Assessment and Analysis
 - A. Validate identification of public health problems pertinent to the population
 - B. Organize surveillance
 - C. Design investigation of acute and chronic conditions or other adverse outcomes in the population
 - D. Synthesize principles of good ethical/legal practice for application to study design and data collection, dissemination, and use
 - E. Manage data from surveillance, investigations, or other sources
 - F. Evaluate data from an epidemiologic investigation or study
 - G. Evaluate results of the analysis, and interpret conclusions
 - H. Formulate new interventions on the basis of evidence when available, 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. Develop processes for using laboratory resources to support epidemiologic activities
 - C. Apply principles of informatics, including data collection, processing, and analysis, in support of epidemiologic practice
 - D. Develop and manage information systems to improve effectiveness of surveillance, investigation, and other epidemiologic practices
3. Communicate with Various Audiences in a Timely and Relevant Manner
 - A. Organize preparation of written and oral reports and presentations that communicate necessary information to professional audiences, policymakers, and the general public
 - B. Create messages that follow the principles of risk communication
 - C. Model interpersonal skills in communications with agency personnel, colleagues, and the public
 - D. Use effective communication technologies
4. Integrate Community Dimensions into Epidemiology Practice
 - A. Lead epidemiologic studies, public health programs, and community public health planning processes at the state, local, or tribal level
 - B. Develop community partnerships to support epidemiologic investigations
5. Work in a Culturally Competent Manner
 - A. Differentiate special populations 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. Ensure that surveillance systems are designed to include groups subject to health disparities or other potentially underrepresented groups (using standard categories where available)
 - D. Organize investigations that use languages and approaches tailored to the population
 - E. Ensure that standard population categories or subcategories are used for data analyses

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/.

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- F. Use knowledge of specific sociocultural factors in the population to interpret findings
 - G. Recommend actions that will be relevant to the affected community
6. Practice Financial and Operational Planning and Management
- A. Conduct epidemiologic activities within the financial and operational plan of the agency
 - B. Describe the financial planning and budgetary process of the agency
 - C. Implement operational and financial plans for assigned projects
 - D. Prepare proposals for extramural funding for review and input from managers
 - E. Use skills that foster collaborations, strong partnerships, and team-building to reach epidemiology program objectives
7. Model Leadership and Systems Thinking
- A. Promote 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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Recommend Qualification Requirements

Education and Experience:

- A master's degree with a focus in epidemiology or biostatistics and ≥ 4 years' work experience in epidemiology in a public health agency

OR

- A doctoral-level degree in epidemiology or biostatistics, supplemented with ≥ 2 years' work experience at a Tier 2 Epidemiologist level

OR

- Other non epidemiology professional 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 program) and ≥ 4 years' work experience at a Tier 2 epidemiologist level

Special Requirements That May Apply:

- Incumbent must be willing to receive vaccinations 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.