Class Code: 02427

Iowa Department of Administrative Services – Human Resources Enterprise
Job Classification Description

Epidemiologist

Definition

Conducts epidemiologic surveillance and investigations, and promotes prevention and control activities for public health programs; designs and implements prevention and control measures based upon epidemiologic data; identifies risk factors that impact health by predisposing or protecting against disease, illness, injury, developmental abnormalities, or death; performs related work as required.

The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

Work Examples

Serves as an epidemiologist responsible for epidemiological program development, implementation, and maintenance. Epidemiologic program examples may include: vector-borne diseases epidemiology program, influenza epidemiology program, or opioid epidemiology program.

Provides epidemiological technical expertise and advice to partners, contractors, local public health departments, healthcare providers, laboratories, other state agencies, and the public.

Reviews analysis of epidemiologic program-level surveillance and investigation data to determine whether additional data or data analysis is needed to draw epidemiological conclusions.

Conducts surveillance by collecting, analyzing, and interpreting epidemiologic data.

Investigates cases and outbreaks by administering interviews and assessments, and conducting epidemiological analysis of investigation data.

Develops program-specific plans including goals and objectives, policies and procedures, program evaluation strategies, program reporting requirements, and recommendations for financial resources and staffing requirements.

Implements new and/or maintains existing epidemiologic surveillance systems by: defining epidemiologic surveillance system objectives; identifying sources of epidemiological surveillance data; recruiting partners to report and/or acquiring access to epidemiological surveillance data; analyzing and interpreting epidemiological surveillance data; and determining how the epidemiological surveillance data will be shared and presented to partners.

Leads the epidemiologic investigation of cases, clusters, and outbreaks of infectious, noninfectious, and chronic diseases; environmental poisonings and conditions; injuries; or substance misuse. Ensures that epidemiologic investigation tools are developed; interviews are conducted; epidemiologic investigation data from all sources is analyzed; conclusions and recommendation are developed based upon the epidemiological data analysis; investigation reports are composed and approved; and clinical and/or environmental samples are collected.

Communicates epidemiological investigation and surveillance findings to partners and the Department.

Conducts education and outreach to partners and the public related to the epidemiological program.

Communicates information on progress toward program objectives and outcomes to supervisor.

Competencies Required

Knowledge:

- English Language – The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Mathematics – Arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Medicine and Dentistry – The information and techniques needed to diagnose and treat human injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.
- Biology – Plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.
- Sociology and Anthropology – Group behavior and dynamics, societal trends and influences, human migrations, ethnicity, cultures and their history and origins.
- Education and Training – Principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.

Abilities:

- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning – Combine pieces of information to form general rules or conclusions.
- Oral Comprehension – Listen to and understand information and ideas presented through spoken words and sentences.
- Written Comprehension – Read and understand information and ideas presented in writing.
- Oral Expression – Communicate information and ideas in speaking so others will understand.
- Written Expression – Communicate information and ideas in writing so others will understand.
- Originality – Come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
- Mathematical Reasoning – Choose the right mathematical methods or formulas to solve a problem.

Skills:

- Science – Using scientific rules and methods to solve problems.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Active Learning – Understanding the implications of new information for both current and future problem-solving and decision-making.
- Reading Comprehension – Understanding written sentences and paragraphs in work related documents.

- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Writing – Communicating effectively in writing as appropriate for the needs of the audience.
- Speaking – Talking to others to convey information effectively.
- Systems Analysis – Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Systems Evaluation – Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

Minimum Qualification Requirements

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

1) Graduation from an accredited college or university with a graduate degree in public health with at least two courses related to the principles and practice of epidemiology.
2) All of the following (a and b):
    a. Graduation from an accredited college or university with a non-public health graduate degree with at least two courses related to the principles and practice of epidemiology; and
    b. Three years of experience in applied epidemiology in an infectious, noninfectious, or chronic diseases; environmental poisonings or conditions; injury prevention; or a substance misuse related epidemiology program.

Effective date: 09/20 SA