# Professional Level Public Health Informatician

Sample Position Description and Sample Career Ladder

April 2014

# Acknowledgements

Public Health Informatics Institute (PHII) wishes to thank the Association of State and Territorial Health Officials (ASTHO) and the National Association of County & City Health Officials (NACCHO) for partnering on this project. In addition, this project would not have been possible without the engagement of members in both state and local health departments.

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Email info@phii.org

# Sample Position Description
# Professional Level Public Health Informatician

## Summary

*Professional Level Public Health Informatician* is a sample position description in a classification series of 4-5 progressively responsible positions within career ladder that does not include management responsibilities.

## Scope

The purpose of this position is to provide strategic and technical support to informatics executives and management to meet the goals and objectives of specific public health programs, in alignment with an agency mission.

This position is a senior-level professional position within a public health agency. The incumbent serves in a leadership capacity as a public health informatics subject matter expert regarding public health programs. Under the direction of executive level staff, the incumbent provides leadership and carries out complex scientific and information assessments to support public health policies and practices, including community health improvement, decision support, and stakeholder engagement.

The incumbent must be able to work in a complex environment with national, state, and local professionals in public health, epidemiology, evaluation, and information technology. Proficiency in informatics and public health program areas and practice is expected.

## Budget Authority

The incumbent monitors budgets from internal and external sources and may seek funding through preparation of grants and solicitation of private and/or government funding sources.

## Position Titles

The following list of example job titles was built from existing positions at state and local health agencies and recommendations from an expert work group of Public Health Informatics professionals:

| Position Title | Reporting Relationship | Source |
|---|---|---|
| Senior Health Informaticist | Director, Office of Public Health Informatics | State of Utah |
| Senior Health Informatician e-Health Standards, Exchange & Effective Use | Deputy Director, Office of Health Information Technology | State of Minnesota |
| Informatics Manager | Public Health Program Director | State of Oregon |
| Public Health Informatics Specialist II (e.g., HL7 Specialists, Interfaces Developer, Data Reporting/Visualization Specialist) | | Expert work group suggestion |

| Position Title | Reporting Relationship | Source |
|---|---|---|
| Interoperability Coordinator | | Expert work group suggestion |
| Public Health Informatics Specialist 3 | | Expert work group suggestion |

## Relationship

The incumbent reports to an executive level position (e.g., Chief Informatics Officer, Director, or Deputy Director) within a bureau, division, or office. The incumbent typically serves as a liaison between and among a range of program areas within an agency, including public health programs, business support, clinical areas, and information technology teams. The incumbent frequently interacts with agency program and project managers and may prepare reports, documents, and other communication for executive level staff. The incumbent may interact with members of state legislature, local health commissioners, and/or health officers on occasion. The incumbent has frequent interaction with management level external stakeholders in clinical healthcare settings, other health and human service providers, schools, governmental agencies, and other community partners.

## Decision Making Authority

Under executive directives, the incumbent contributes to the development of a wide range of informatics initiatives and solutions, including architectures, identification and use of data standards, security and confidentiality concerns, integration, and interoperability. The incumbent leads, plans, develops, and oversees implementations, and maintains a wide range of informatics products and projects. The incumbent exercises considerable independent judgment to carry out responsibilities of the role.

## Major Duties and Responsibilities

This list contains examples of duties and responsibilities that may be associated with professional level informatics positions. This list is not all inclusive and may vary from position to position. Hiring agencies, depending on the specific nature of the position, may modify the major duties and responsibilities and/or identify additional duties and responsibilities, based on a current position analysis.

- Provides strategic assistance to the agency to assure that information systems support the information needs of the public health agency, statewide public health programs, policy development, research, and evaluation.
- Uses information system(s) and other data sources in collaboration with public health programs and other state agency program staff to evaluate program and population-based performance, evaluations, and outcome measures.
- Participates in and coordinates ongoing information system application testing, implementation, and evaluation with project teams across the public health program and/or agency.
- Creates accessible reports of health data for state and local stakeholders and partners.
- Designs workflows and processes for data management.
- Monitors and supports efforts of informatics support specialists.

- Oversees and evaluates the adoption of automated information systems(s) to accommodate special and complex agency needs.
- Evaluates complex organizational and information systems for the purpose of program monitoring and evaluation, functionality, and reliability to meet goals and objectives of programs and policies.
- Evaluates necessary changes in existing information resources to 1) ensure that comprehensive, valid, and reliable data are available for program research and evaluation, 2) comply with nationally-recognized data standards, and 3) assess information technology solutions.
- Evaluates the information technology system(s) shared by state and local agencies to identify system requirements and to implement health information exchange data standards.
- Recommends enhancements to agency information systems to interface with existing systems as needed.
- Works with vendors, IT professionals, and public health program areas to develop system requirements and plan, develop, and maintain health information systems.
- Participates in agency wide implementations of interoperable information systems.
- Analyzes, summarizes, and/or reviews data including report findings, interpreting results, and making recommendations.
- Monitors and evaluates electronic operation processes and practices for quality and effectiveness and makes recommendations for improvement.
- Anticipates the impact that new or modified software will have on existing standards and systems, workforce, and public health programs, and makes recommendations for solutions.
- Manages resources and contracts.
- Tests information system usability and evaluates usage, identifies barriers, and proposes solutions.
- Troubleshoots problems reported by information system users.
- Works with users to help them articulate their information needs.
- Oversees informatics activities, including development of use cases, business cases, and workflow analysis.
- Functions as a resource to provide information or determines the most effective way of meeting the informatics needs of management, staff, clients, or customers.
- Provides or arranges for technical assistance and/or training for system users, supervisors, and directors.
- Provides technical assistance and training in the use of data in policy and program development efforts with state and local public health agencies and staff.
- Manages bureau/division informatics project portfolios and coordinates informatics priorities for areas of responsibility.
- Identifies and procures funding through grants, partnerships, and other funding sources.
- Conducts literature reviews, and prepares informatics models, frameworks, or summary documents as needed.
- Prepares presentations, communications materials, press releases, and other media-related materials.

- Establishes study methodologies and protocols for collecting, retrieving, analyzing, and maintaining programmatic data across program areas.
- Serves as lead staff for HIT assessment and evaluation activities.
- Identifies areas of collaboration with partners to achieve agency objectives.
- Ensures consistency with, leverages, and seeks to influence as appropriate, national standards and certification initiatives to achieve interoperability.
- Works with stakeholders for eHealth issues to advance agency goals and objectives.
- Provides recommendations to senior leadership, as requested, to support agency decisions on information systems requirements and procurement.
- Provides informatics consultation to ensure use of effective informatics principles and planning methodologies.
- Coordinates adoption of health data standards that facilitate interoperability between public health and other information systems.

## Knowledge, Skills, and Abilities

This list contains examples of knowledge, skills, and abilities that may be associated with professional level informatics positions. It is not all inclusive and may vary from position to position. Hiring agencies, depending on the specific nature of the position, may modify the knowledge, skills, and abilities and/or identify additional knowledge, skills, and abilities, based on a current position analysis.

### *Knowledge of:*
- Public health and healthcare systems and practices.
- Strategies for achieving effective data acquisition, management, quality, storage, use, and application to address population health needs.
- Applicable laws, statues, and policies regarding health information including security, privacy, and management of confidential data.
- Public health reporting, information system standards, and public health data.
- Statistical and business analysis.
- Business operations, methods, and practices.
- Workflow engineering.
- Informatics project/product portfolio management.
- Information Technology Lifecycle and information system design.
- Automated software applications.
- Computer hardware and system development.
- Applicable healthcare and public health standards, message formats, and transport mechanisms.
- Qualitative and quantitative techniques for analyzing and measuring the effectiveness, efficiency, and productivity of administrative and technical programs.
- Project management disciplines.
- Database and data warehouse development, use, and management.
- Principles and practices of epidemiology and statistical analysis.

- Data collection and use methodologies, including survey research, registry operations, usability studies, focus groups, and interview data collection and analysis.

### *Skills to:*
- Provide technical assistance to system users and community partners.
- Perform various analytic functions which may include business, workflow, and/or statistical analysis.
- Communicate complex technical information to a wide range of non-technical audiences or constituencies.
- Interpret and evaluate information to analyze, summarize, and prepare reports.
- Be familiar with a variety of database management and reporting applications, particularly those relevant for the program in which the position will reside.
- Strong oral and written communication skills, including experience in grant and manuscript preparation.

### *Ability to:*
- Select and utilize software tools in support of public health data acquisition, management, analysis planning, and reporting.
- Plan, organize, and prioritize projects, time, and workload assignments for a portfolio of informatics projects.
- Evaluate information and make recommendations about approaches, methods, and practices to meet agency/departmental goals.
- Engage with diverse audiences and multiple stakeholders.
- Assess stakeholder and end user information needs.
- Support implementation of information system development, procurement, and deployment activities under the direction of executive leadership.
- Support use of informatics practices to integrate clinical health, environmental health, and population health data to improve priority community level health outcomes.
- Implement solutions that ensure confidentiality, security, and data integrity while maximizing availability of information for public health and community access.
- Communicate verbally and in writing complex information effectively to inform, persuade, and influence a wide range of audiences.
- Evaluate the impact of new or modified software on existing workforce, standards, and systems.
- Perform analysis and evaluation of user experience, adoption, and software using appropriate methodology and techniques.
- Provide technical assistance to achieve statewide program goals and objectives, health information exchange, data linking and system integration, and methods for linking performance measurement and program evaluation to population surveillance.
- Collaborate across agencies and programs to meet shared goals.

# Sample Career Ladder
# Professional Level Public Health Informatician

## Summary

The sample career ladder for the professional level public health informatician series includes four positions, listed from most to least senior:

- Public Health Informatics Specialist III
- Public Health Informatics Specialist II
- Public Health Informatics Specialist I
- Public Health Informatics Analyst

## Public Health Informatics Specialist III

### FLSA Status:
Professional Exempt

### Scope:
Senior level position with agency wide focus. High level of independent decision making with broad and diverse responsibilities.  May represent the agency with internal and external partners under supervision of Chief Informatics Officer. Oversees multiple unrelated programmatic areas.

### Supervision:
May lead teams or work independently

### Reporting Relationship:
Undefined; Possibly Chief Informatics Officer or Deputy Director

### Description:
Incumbent serves in a leadership role as a public health informatics subject matter expert regarding public health programs. Often, this position serves as a liaison between program areas, business support, clinical staff, and IT staff to support development and implementation of information systems. The incumbent may have responsibilities related to project management, communication, and stakeholder engagement for assigned projects.  Incumbent may contribute to development of agency-wide architectures, identification and use of data standards, and solutions to issues of security and confidentiality, integration, and interoperability.  This position may provide lead and carry out complex scientific and informatics assessment to support public health policies and practices, including community health improvement, decision support, and stakeholder engagement.

Incumbent applies theoretical and practice based expertise to information technology to support prevention and health promotion activities of the agency, public health programs, and surveillance and disease reporting, enabled by effective application of technology.

Incumbent facilitates knowledge sharing and collaboration with other states, federal government agencies, tribal or other governments, local municipalities, and the private sector.

This position may direct, lead, or participate in a wide range of scientific research, assessment, planning, policy development, and evaluation studies and other activities related to public health informatics.

This position may supervise or lead other public health informaticians.

*Minimum Qualifications:*

Minimum qualifications for this position include a combination of educational preparation and related work experience:

a) Bachelor's degree in Health Informatics, Public Health, Science, Epidemiology, Public Policy or Health Policy,  Health Services Research, Health Information Sciences, Computer Science, or closely related field and **six (6) years** of professional experience in a comprehensive health program with health informatics responsibilities that include conducting and/or supporting informatics projects including scientific investigations information architecture management, and implementing data and information standards; *or*

b) Master's degree from an accredited graduate school with a focus in public health, public health informatics, health care informatics, information technology, computer science, information science, public policy or health policy, statistics or a related field and **four (4) years** of experience in informatics including experience in conducting and/or supporting informatics projects including scientific investigations or data management; *or*

c) Doctoral-level degree such as PhD of Informatics,  Doctor of Public Health (Dr.PH.), Doctor of Health Science (D.H.Sc.), Ph.D. Management Information Systems and Technology, Ph.D Computer Science or closely related field with **two (2) years** of experience doing senior-level public health informatics work.

# Public Health Informatics Specialist II

## FLSA Status:
Professional Exempt

## Scope:
Intermediate level position with broad decision making authority for specific area(s) of focus. Oversees multiple related program areas, or informatics for a division or department with broad program responsibilities, or a specific focus on agency-wide informatics practices, such as interoperability across the agency, data standards across multiple program areas, or implementation of Meaningful Use program criteria for multiple program areas.

## Supervision:
May lead teams or work independently

## Reporting Relationship:
Undefined; Depending on area of expertise, may report to Chief Informatics Officer, Deputy Director, or programmatic division director

## Description:
Incumbent serves as a senior or lead public health informatics specialist providing expert public health informatics leadership including policy analysis and scientific and technical skills in public health informatics.  This position performs advanced, highly complex, varied tasks associated with public health informatics responsibilities such as planning, policy development, system analysis, communication, project management, system development, implementation, and evaluation, as well as maintenance, training, and other management functions related to public health informatics within a program, division, and agency.

This position plans and oversees the implementation of the development and maintenance of health information system(s). The incumbent develops or oversees development of use cases, business process documentation, workflow analyses for information system development, and manages resources and contracts for assigned areas of public health practice.

Incumbent upgrades or replaces existing systems, trains and provides assistance to public health informatics system users, tests system usability, evaluates usage, and identifies barriers and proposes solutions.

The incumbent may lead or participate in the procurement, development, implementation, management, evaluation, and continuous improvement of public health information systems.

This position may supervise or lead other public health informaticians.

*Minimum Qualifications:*

Minimum qualifications for this position include a combination of educational preparation and related work experience:

a) Bachelor's degree in Health Informatics, Public Health, Science, Epidemiology, Public Policy or Health Policy, Health Services Research, Health Information Sciences, Computer Science, or closely related field and **five (5) years** of professional experience in a comprehensive health program with health informatics responsibilities that include conducting and/or supporting informatics projects including scientific investigations information architecture management, and implementing data and information standards; *or*

b) Master's degree from an accredited graduate school with a focus in public health, public health informatics, health care informatics, information technology, computer science, information science, public policy or health policy, statistics or a related field and **three (3) years** of experience in informatics including experience in conducting and/or supporting informatics projects including scientific investigations or data management; *or*

c) Doctoral-level degree such as PhD of Informatics, Doctor of Public Health (Dr.PH.), Doctor of Health Science (D.H.Sc.), Ph.D. Management Information Systems and Technology, Ph.D Computer Science or closely related field with **one (1) year** of experience doing senior-level public health informatics work.

# Public Health Informatics Specialist I

*FLSA Status:*
Professional Exempt

*Scope:*
Intermediate level with focus on a single programmatic area within a department, division or business unit.

*Supervision:*
Serves as a team member working under the direction and guidance of identified supervisor, generally does not supervise others

*Reporting Relationship:*
Undefined; possibly a programmatic division director

*Description:*
Incumbent serves as an intermediate-level professional public health informatics specialist, providing public health informatics expertise for specific public health information systems. This position performs a broad and moderately complex range of tasks associated with public health informatics responsibilities such as planning, policy development, system analysis, communication, project management, system development, implementation, and evaluation, as well as maintenance, training, and other management functions related to public health informatics within a single public health information system, project, or study.

Incumbent conducts business analysis of program operations and workflows where needed and assists with development of scope and specifications for system design. This position works closely with stakeholders to assess, manage, and communicate the change that is a direct and indirect result of public health informatics activities.

The position may utilize statistics and research methods commonly used in scientific, surveillance, or epidemiological research to analyze, interpret, and report on public health data.

Incumbent works independently or as an experienced team member.

*Minimum Qualifications:*
Minimum qualifications for this position include a combination of educational preparation and related work experience:

 a) Bachelor's degree in Health Informatics, Public Health, Science, Epidemiology, Public Policy or Health Policy,  Health Services Research, Health Information Sciences, Computer Science, or closely related field and **three (3) years** of professional experience in a comprehensive health program with health informatics responsibilities that include conducting and/or supporting

informatics projects including scientific investigations information architecture management, and implementing data and information standards; *or*

b) Master's degree from an accredited graduate school with a focus in public health, public health informatics, health care informatics, information technology, computer science, information science, public policy or health policy, statistics or a related field and **two (2) years** of experience in informatics including experience in conducting and/or supporting informatics projects including scientific investigations or data management; *or*

c) Doctoral-level degree such as PhD of Informatics,  Doctor of Public Health (Dr.PH.), Doctor of Health Science (D.H.Sc.), Ph.D. Management Information Systems and Technology, Ph.D Computer Science or closely related field.

# Public Health Informatics Analyst

## *FLSA Status:*
Professional Exempt

## *Scope:*
Entry level position

## *Supervision:*
Serves as a team member working under the direction and guidance of identified supervisor, does not supervise other staff

## *Description:*
Incumbent serves as an entry level professional public health informatics specialist, providing public health informatics expertise to tasks related to data management, analysis, and reporting; and recommendations related to public health data.

Incumbent administers program-specific data set(s) on a day to day basis, including responsibilities related to data quality, data maintenance and archiving, analysis, documentation and reporting, and other related work as required. This position may assist in the design and implementation of public health information systems and programs. Incumbent is responsible for analyzing and interpreting data for reports, presentations, and publications and making recommendations based on analysis. Incumbent provides analytic and public health support to program teams as requested in the areas of data analysis, protocols, report and manuscript writing, technical presentations, and responses to informatics inquiries.

Incumbent performs statistical analysis; ad hoc analyses; and data mining, including extraction, transformation, and processing of complex data sets; and creates analytic data sets.

Incumbent works independently or as an experienced team member.

## *Minimum Qualifications:*
Minimum qualifications for this position include a combination of educational preparation and related work experience:

a) Bachelor's degree in Health Informatics, Public Health, Science, Epidemiology, Public Policy or Health Policy,  Health Services Research, Health Information Sciences, Computer Science, or closely related field and **three (3) years** of professional experience in a comprehensive health program with health informatics responsibilities that include conducting and/or supporting informatics projects including scientific investigations information architecture management, and implementing data and information standards; ***or***

b) Master's degree from an accredited graduate school with a focus in public health, public health informatics, health care informatics, information technology, computer science, information science, public policy or health policy, statistics or related field; *or*
c) Doctoral-level degree such as PhD of Informatics,  Doctor of Public Health (Dr.PH.), Doctor of Health Science (D.H.Sc.), Ph.D. Management Information Systems and Technology, Ph.D Computer Science or closely related field.