Immunization Information System (IIS) Testing Analyst

Sample Role Description

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Note: This role description is meant to offer sample language and a comprehensive list of potential desired responsibilities with corresponding knowledge, skills and abilities (KSAs). Actual position descriptions should filter out information that is not applicable for a specific position or role. Depending on staffing levels, several roles may be combined within a single position, or several positions may fill the same role. The term "Immunization Information System" or "IIS" may be replaced with "Registry" within position titles in some jurisdictions.

Summary

IIS Testing Analyst is a role typically found in a mid-level analyst series. It often requires specialized knowledge, however, and a background in information yechnology is very helpful.

Scope

The person fulfilling this role is responsible for drafting test cases and test plans, conducting and documenting functional user acceptance testing and regression testing prior to and/or following a release, tracking bugs and their resolution, and running routine test scripts to ensure the performance and up-time of the IIS.

Budget Authority

None

Position Titles

The following example job titles were gathered from existing positions at state and local health agencies:

- Tester
- User Acceptance Tester
- System Performance Monitor
- Analyst

Relationship

The person in this position typically reports to the IIS Manager. Internally, this position works very closely with the rest of the IIS team, and with the vendor/implementer/IT support that is supporting/maintaining the IIS.

Decision Making Authority

The person in this role exercises considerable independent judgment in carrying out responsibilities within a highly collaborative environment. Decision making generally requires substantial negotiation and compromise with a variety of considerations, including the context imposed by applicable laws, statutes, rules, interests of stakeholders, available data, and resources. Decision making authority is commonly characterized as follows:

- Applies laws, rules, policies and best practices to assist with design of functionality.
- Applies business rules and aspects of design in developing testing protocols.
- Determines passage or failure of steps in test plan.
- Determines disposition of application errors and/or bugs.

Major Duties and Responsibilities

This list contains examples of duties and responsibilities that may be associated with a Testing Analyst role. This list offers many possible duties and responsibilities from which to select in

order to create a position most appropriate to your program needs and your human resource requirements.

Conducting Testing
- Clarify technical specifications with partners.
- Executes detailed test plans to test the appropriate development and construction of the IIS.
- Conducts both unit testing and regression testing.
- Develops and drafts detailed test plans designed to test the IIS.

Documenting and Reporting
- Documents all planned test scripts and test cases.
- Documents that tests were conducted.
- Documents outcomes, both positive and negative, of test scripts and results.

Communication and Training
- Communicates results to IIS team and to IIS vendor as appropriate.
- Communicates test plans to IIS team and to IIS vendor as appropriate.
- Attends training to develop content and subject matter expertise in the IIS.
- Support internal users on reporting system issues.

Systems Analysis
- Collaborate with the IIS vendor, Immunization Program staff and managers, and outside partners to evaluate the existing system and provide input to plan enhancements.
- Recommend interventions to improve data quality.
- Propose system enhancements based on evaluation.
- Contribute to bug, maintenance and feature requests, UAT and regression testing and product releases with staff and IIS vendor.

Functioning within an interdisciplinary team environment
- Consistently treats customers, stakeholders, partners, vendors and co-workers with dignity and respect.
- Creates and maintains a work environment that is welcoming and respectful of diversity.
- Sets clear guidelines and models expected professional behaviors.
- Other tasks as assigned.

Key Competencies

This list contains the key competency areas with corresponding examples of knowledge, skills and abilities that may be associated with the IIS Testing Analyst role. It is not all inclusive and may vary from position to position.

Standards and Interoperability

Applies informatics standards to ensure interoperability between disparate information systems.

Knowledge Statements:
- Knowledge of immunization terminology and practices, and the data elements that support them.
- Knowledge of relevant IIS standards, including HL7 2.x and SOAP/Web Services.
- Knowledge of IIS best practice documentation developed by the Modeling of Immunization Registry Operations Workgroup (MIROW).
- Knowledge of national initiatives such as Meaningful Use, and their impact on IIS and health information exchange.
- Knowledge of standardized IIS business rules and best practices.

Abilities Statements:
- Ability to apply local and national standards consistently.
- Ability to quickly learn data fields commonly used in clinic practices to record vaccination encounters.
- Ability to quickly learn new terminology.

Project Management

Practices project management and program management techniques to engage stakeholders and team members in achieving goals and expectations.

Knowledge Statements:
- Knowledge of diverse IIS stakeholders and funding mechanisms.

Skills Statements:
- Skill to develop specific goals and plans to prioritize, organize, and accomplish work.
- Skill to document status and outputs of projects and processes.
- Skill to engage in testing of information solutions using appropriate methodologies and techniques.
- Skill in coordinating diverse activities to ensure completion of projects, tasks and assignments.
- Skill to oversee testing of information solutions using appropriate methodologies and techniques.

Abilities Statements:
- Ability to balance multiple, competing program demands.

Information Systems

Applies fundamental knowledge of hardware, software (including business rules and algorithms), and network infrastructure essential to ensuring that public health requirements are met.

Knowledge Statements:
- Knowledge of health information systems.
- Knowledge of large databases and database functions/utilities.

- Knowledge of electronic data transfer methods.
- Knowledge of automated software applications such as IIS.
- Knowledge of relevant software and computer query and reporting tools, such as SQL, Crystal Reports, Business Objects or Excel to run reports.
- Knowledge of testing and troubleshooting techniques.
- Knowledge of information system analysis, design and data management concepts.

Skills Statements:
- Skill in use of common software products such as Word, PowerPoint, Excel.
- Skill to adopt complex, modern information technology and communication tools.
- Skill in drafting end user and technical documentation.

Abilities Statements:
- Ability to solve complex issues requiring coordination, technical ability, and knowledge of computer and information systems to evaluate alternatives.

Policy

Ensures that information projects adhere to relevant laws, rules, policies, procedures, and regulations.

Knowledge Statements:
- Knowledge of applicable laws, statutes, policies and procedures regarding public health and health information.
- Knowledge of types of agreements such as data use agreements and memorandums of understanding that govern data access and sharing.
- Knowledge of policies and Standard Operating Procedures (SOPs) specific to IIS operations.
- Knowledge of records management.
- Knowledge of recommended schedules.

Skills Statements:
- Skill in appropriately applying IIS policies and procedures to specific situations
- Skill to use relevant information to determine whether events or processes comply with laws, regulations, standards or procedures.
- Skill to develop standard operating procedures.

Abilities Statements:
- Ability to apply public health laws, regulations and policies specific to the Immunization Program.
- Ability to quickly learn processes, and practices.
- Ability to recommend modifications or enhancements to systems and policies.
- Ability to establish procedures for diagnosing and solving technical problems.
- Ability to use relevant information and individual judgment to determine whether events or processes comply with policies and procedures.

Communication

Practices active, effective communication between IT, public health and other relevant stakeholders.

Skills Statements:
- Skill in use of phone, email, FAX, text messaging, instant messaging, and other telecommunications methods.
- Skill in communicating in writing, orally, electronically and in person with linguistic and cultural proficiency.

Abilities Statements:
- Ability to build mutual trust, respect and cooperation among team members.
- Ability to communicate effectively to technical and non-technical audiences in both written and oral methods.
- Ability to contribute as a strong member of a self-directed work team.
- Ability to develop constructive and cooperative working relationships with others, and maintain them over time.
- Ability to effectively express ideas orally and in writing using appropriate language and organizing ideas in an objective manner.

Analysis, Visualization & Reporting

Translates data to information and knowledge that leads to action using consistent analytic and reporting tools and techniques.

Skills Statements:
- Skill to analyze business needs and product requirements to create or design a system enhancement.
- Skill to determine how a system should work and how changes in conditions, operations and the environment will affect the outcomes.

Abilities Statements:
- Ability to apply general rules to specific problems.
- Ability to exercise appropriate judgment in determining when an issue or problem needs referral to management or other staff.
- Ability to combine pieces of information to form general rules or conclusions.

Evaluation

Applies rigorous methods to evaluate the effectiveness of workflows and information technology.

Knowledge Statements:
- Knowledge of general data quality concepts.

Skills Statements:
- Skill to identify complex problems and review related information to develop and evaluate options and implement solutions.

Abilities Statements:
- Ability to evaluate information against a set of standards of information integrity and comparability.

Principles & Strategy

Applies informatics principles, strategic thinking, and leadership techniques to public health information needs.

Knowledge Statements:
- Knowledge of the development of IIS systems over time.
- Knowledge of the multiple purposes and audiences that leverage IIS data and functionality, and the methods by which they access IIS data.
- Knowledge of the basic concepts of vaccine management, such as inventory and accountability.

Abilities Statements:
- Ability to work independently with little or no supervision.

- Ability to work well in a high-pressure environment.
- Ability to apply high attention to detail to work products.
- Ability to use independent judgment, decision making and problem resolution to perform technical, operational, or administrative functions.

For more resources, information and training related to workforce development, please refer to informaticsacademy.org and phii.org/resources.

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