Certified Health Data Analyst (CHDA) Examination Content Outline

Number of Questions on Exam:

- **150 multiple-choice (130 scored/20 pretest)**

Exam Time: 3.5 hours – no breaks

Domain 1 – Data Management (30-34%)

Tasks:

1. Assist in the development and maintenance of the data architecture and model to provide a foundation for database design that supports the business' needs
2. Establish uniform definitions of data captured in source systems to create a reference tool (data dictionary)
3. Formulate validation strategies and methods (i.e., system edits, reports, and audits) to ensure accurate and reliable data
4. Evaluate existing data structures using data tables and field mapping to develop specifications that produce accurate and properly reported data
5. Integrate data from internal or external sources in order to provide data for analysis and/or reporting
6. Facilitate the update and maintenance of tables for organization's information systems in order to ensure the quality and accuracy of the data

Domain 2 – Data Analytics (35-39%)

Tasks:

1. Analyze health data using appropriate testing methods to generate findings for interpretation
2. Interpret analytical findings by formulating recommendations for clinical, financial, and operational processes
3. Validate results through qualitative and quantitative analyses to confirm findings

Domain 3 – Data Reporting (29-33%)

Tasks:

1. Design metrics and criteria to meet the end users' needs through the collection and interpretation of data
2. Generate routine and ad-hoc reports using internal and external data sources to complete data requests
3. Present information in a concise, user-friendly format by determining target audience needs to support decision processes
4. Provide recommendations based on analytical results to improve business processes or outcomes

Knowledge topics

Data Management
Knowledge of:

- Relationship between the data and the organization's strategic goals and priorities
- Data models (conceptual, logical, and physical)
- Basic knowledge of various architecture platforms (e.g., Oracle, SQL server)
- Relational database structure (primary key, secondary key)
- Electronic Health Record (EHR) systems
- Database language (SQL, XML, etc.)
- Applicable data standards (e.g., ASTM, CDISC, HL7)
- Reference classification/terminology systems and industry data sets requirements (e.g., ICD-9-CM, CPT, UB-04, SNOMED, LOINC)
- Systems testing (integration, load, interface, user acceptance)
- Industry standards (regulatory requirements)
- Best practices for auditing (audit guidelines, system audit trails, and audit logs)
- Standard administrative healthcare data (e.g., UB-04, CMS form 1500)
- Classification systems data (e.g., ICD-9-CM, CPT, SNOMED, LOINC)
- Source systems (HIS systems, pharmacy, radiology, financial, etc.)
- Reference classification/terminology systems and industry data sets requirements (e.g., ICD-9-CM, CPT, UB-04, SNOMED, LOINC)
- Relational database structure (primary key, secondary key)
- Software applications (e.g., word processing, spreadsheet, presentation, and databases)
- Applicable data standards (e.g., ASTM, CDISC, HL7)
- Source systems (HIS systems, pharmacy, radiology, financial, etc.)
- Reference classification/terminology systems and industry data sets requirements (ICD-9-CM, CPT, UB-04, revenue codes, etc.)
- Classification systems and their history (e.g., retirement of codes and their allowed reuse with new descriptors)
- Structure of the data tables
- Scheduled updates of source system content
- Industry standard maps between classification systems

Data Analytics
Knowledge of:

- Basic principles of clinical, financial, and operational data
- Basic understanding of database query syntax (such as SQL)
- Basic understanding of SAS, or SPSS procedures
- Appropriate use of data mining techniques
- Quality standards, processes, and outcome measures
- Risk adjustment techniques
- Business processes (e.g., workflow, system limitations, regulatory and payor guidelines)
- Medical terminology
- Healthcare reimbursement methodologies

- Classification systems
- Industry-standard terms of clinical, financial, and operational data
- Source data content and field attributes
- Qualitative and quantitative analysis techniques
- Healthcare operations to improve clinical and financial outcomes

Data Reporting
Knowledge of:

- Healthcare industry
- Stakeholders within healthcare delivery system
- Stakeholders within healthcare delivery system
- Software applications (Microsoft Word, Excel, PowerPoint, Access)
- Appropriate modes of presentation (Web conferencing, teleconferencing, AV, etc.)
- Database programs such as Access or SQL Server
- Basic understanding of database query syntax (such as SQL)
- Basic understanding of SAS, or SPSS procedures
- Standard healthcare data sets
- Classification systems and clinical vocabularies and nomenclature (ICD, CPT, HCPC, LOINC, SNOMED-CT, NDC, etc.)
- Basic principles of clinical, financial, and operational data
- Quality standards and outcome measures