American Health Information Management Association  
HIM Baccalaureate Degree Entry-Level Competencies  
And Knowledge Clusters  
Gap Analysis Worksheet  
2005 and Beyond

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<thead>
<tr>
<th>Your Program Course(s) where Competencies Are Addressed</th>
<th>HIM Baccalaureate Degree Entry-Level Competencies for 2005 and Beyond</th>
<th>Your Program Course(s) where Knowledge Clusters are Taught</th>
<th>2005 and Beyond Knowledge Cluster Content</th>
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<tr>
<td>I. Domain: Health Data Management</td>
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<td></td>
<td>Health Data Structure, Content, and Standards</td>
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<tr>
<td>A. Subdomain: Health Data Structure, Content and Standards</td>
<td>1. Manage health data (such as data elements, data sets and databases).</td>
<td></td>
<td>• Structure and use of health information (individual, comparative, aggregate)(5)</td>
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<td></td>
<td>2. Ensure that documentation in the health record supports the diagnosis and reflects the patient’s progress, clinical findings and discharge status.</td>
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<td>• Health information media (paper, electronic/computer-based; e-health-personal, web-based) (5)</td>
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<td></td>
<td>3. Maintain processes, policies and procedures to ensure the accuracy of coded data.</td>
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<td>• Type and content of health record (paper, electronic, computer-based, e-health-personal, web based) (5)</td>
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<td></td>
<td>4. Monitor use of clinical vocabularies and terminologies used in the organization’s health information systems.</td>
<td></td>
<td>• Data quality assessment and integrity (5)</td>
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<td>• Secondary data sources (registries and indexes; databases – such as MEDPAR, NPDB, HCUP) (4)</td>
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<td></td>
<td>• Healthcare data sets (such as OASIS, HEDIS, DEEDS, UHDDS, UACDS, NEDSS, NMMFS) (4)</td>
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<td>• Health information archival systems (5)</td>
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<td></td>
<td>• National Healthcare Information Infrastructure (NHII)(5)</td>
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<tr>
<td>B. Subdomain: Healthcare</td>
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Information Requirements and Standards
1. Develop organization-wide health record documentation guidelines.
2. Maintain organizational compliance with regulations and standards.
3. Ensure organizational survey readiness for accreditation, licensing and/or certification processes.

C. Subdomain: Clinical Classification Systems
1. Select electronic applications for clinical classification and coding.
2. Implement and manage applications and processes for clinical classification and coding.

D. Subdomain: Reimbursement

- Data collection tools (such as forms; computer input screens; other health record documentation tools) (5)

Healthcare Information Requirements and Standards
- Standards and regulations for documentation (such as JCAHO, CARF, COP, AAAHC, AOA) (5)
- Health information standards (such as HIPAA, ANSI, ASTM, LOINC, UMLS, MESH, Arden Syntax, HL-7) (5)

Clinical Classification Systems
- Healthcare taxonomies, clinical vocabularies, terminologies/nomenclatures (such as ICD-9-CM, ICD-10, CPT, SNOMED-CT, DSM-IV) (4)
- Severity of illness systems (4)
### Methodologies

1. Manage the use of clinical data required in prospective payment systems (PPS) in healthcare delivery.
2. Manage the use of clinical data required in other reimbursement systems in healthcare delivery.
3. Participate in selection and development of applications and processes for chargemaster and claims management.
4. Implement and manage processes for compliance and reporting such as the National Correct Coding Initiative.

### II. Domain: Health Statistics, Biomedical Research and Quality Management

#### A. Subdomain: Healthcare

### Reimbursement Methodologies

- Clinical data and reimbursement management (5)
- Compliance strategies and reporting (e.g. National Correct Coding Initiative) (4)
- Charge-master management (4)
- Casemix management (4)
- Audit process such as compliance and reimbursement (5)
- Payment systems (such as PPS, DRGs, APCs, RBRVS, RUGs)(4)
- Commercial, managed care and federal insurance plans(4)
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<th>Statistics and Research</th>
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<tr>
<td>1. Manage clinical indices/databases/registries.</td>
</tr>
<tr>
<td>2. Analyze and present data for quality management, utilization management, risk management, and other patient care related studies.</td>
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<tr>
<td>3. Utilize statistical software.</td>
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<td>4. Ensure adherence to Institutional Review Board (IRB) processes and policies.</td>
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<table>
<thead>
<tr>
<th>Healthcare Statistics, Biomedical Research and Quality Management-Healthcare Statistics and Research</th>
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</thead>
<tbody>
<tr>
<td>• Statistical analysis on healthcare data (5)</td>
</tr>
<tr>
<td>• Descriptive statistics (such as means, standard deviations, frequencies, ranges, percentiles) (5)</td>
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<tr>
<td>• Inferential statistics (such as t-tests, ANOVAs, regression analysis, statistical process control, reliability, validity) (5)</td>
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<tr>
<td>• Vital statistics (5)</td>
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<tr>
<td>• Epidemiology (4)</td>
</tr>
<tr>
<td>• Data reporting and presentation techniques (5)</td>
</tr>
<tr>
<td>• Computerized statistical packages (5)</td>
</tr>
<tr>
<td>• Research design/methods (such as quantitative, qualitative, evaluative, outcomes) (5)</td>
</tr>
<tr>
<td>• Knowledge-based research techniques (such as Medline, CMS, libraries, web sites) (5)</td>
</tr>
<tr>
<td>• National guidelines regarding human subjects’ research (4)</td>
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<tr>
<td>• Institutional review board</td>
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</tbody>
</table>
1. Organize and coordinate facility-wide quality management and performance improvement programs.
2. Analyze clinical data to identify trends.
3. Analyze and present data for healthcare decision-making (such as demonstrating quality, safety and effectiveness of healthcare).

III. Domain: Health Services Organization and Delivery

A. Subdomain: Healthcare Delivery Systems
   1. Monitor the impact of process (5)

Quality Management and Performance Improvement
   • Research protocol data management (4)
   • Quality assessment and management tools (such as benchmarking, ORYX, SQC) (5)
   • Utilization and resource management (4)
   • Risk Management (4)
   • Disease management process (such as case management, critical paths) (4)
   • Outcomes measurement (such as patient, customer satisfaction, disease specific) (5)
national health information initiatives on the healthcare delivery system for application to information system policies and procedures.

2. Interpret, communicate, and apply current laws, accreditation, licensure and certification standards related to health information initiatives at the national, state, local and facility levels.

3. Analyze and respond to the information needs of internal and external customers throughout the continuum of healthcare services.

4. Revise policies and procedures to comply with the changing health information regulations.

5. Translate and interpret health information for consumers and their caregivers.

B. Subdomain: Healthcare Privacy, Confidentiality, Legal, and Ethical Issues

1. Coordinate the Health Services Organization and Delivery

- Organization of healthcare systems (5)
- Components and operation of healthcare organizations including e-health delivery (5)
- Accreditation standards (such as JCAHO, AOA, NCQA, CARF, CHAP, URAC) (5)
- Regulatory and licensure requirements (such as COP, state health departments) (5)
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<th>Implementation of legal and regulatory requirements related to the health information infrastructure.</th>
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<tr>
<td>2. Manage access and disclosure of personal health information.</td>
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<tr>
<td>3. Develop and implement organization-wide confidentiality policies and procedures.</td>
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<tr>
<td>4. Develop and implement privacy training programs.</td>
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<td>5. Resolve privacy issues/problems.</td>
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<tr>
<td>6. Apply and promote ethical standards of practice.</td>
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IV. Domain: Information Technology & Systems

A. Subdomain: Information and Communication Technologies

1. Implement and manage use of technology, including hardware and software, to ensure data collection, storage, analysis and reporting of information.

2. Contribute to the development of networks, including

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<tr>
<td>- Legislative and legal system (4)</td>
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<tr>
<td>- Privacy, confidentiality, security principles, policies and procedures (5)</td>
</tr>
<tr>
<td>- Health information laws, regulations, and standards (such as HIPAA, e-health, JCAHO, state laws) (5)</td>
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<tr>
<td>- Elements of compliance programs (5)</td>
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<tr>
<td>- Professional and practice related ethical issues (5)</td>
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<tr>
<td>Information Technology &amp; Systems</td>
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<tr>
<td>• Computer concepts (hardware components, systems architectures, operating systems and languages, and software packages and tools) (4)</td>
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<tr>
<td>• Communications technologies (networks—LANS, WANS, VPNs; data interchange standards—NIST, HL-7) (4)</td>
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<tr>
<td>• Internet technologies (Intranet, web-based systems, standards—SGML, XML) (4)</td>
</tr>
<tr>
<td>• Data, information and file structures (data administration, data definitions, data dictionary, data modeling, data structures, data warehousing, database management systems) (5)</td>
</tr>
<tr>
<td>• Data storage and retrieval</td>
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B. Subdomain: Data, Information, and File Structures

1. Apply knowledge of data base architecture and design (such as data dictionary, data modeling, data warehousing and so on) to meet organizational needs.

C. Subdomain: Data Storage and Retrieval

1. Apply appropriate electronic or imaging technology for data/record storage.
2. Apply knowledge of intranet and Internet applications to facilitate the electronic health record (EHR), personal health record (PHR), public health, and other administrative applications.

3. Interpret the derivation and use of standards to achieve interoperability of healthcare information systems.
database querying and data mining techniques to facilitate information retrieval.

3. Implement and manage knowledge-based applications to meet end-user information requirements.

4. Design and generate administrative reports using appropriate software.

D. Subdomain: Data security

1. Enforce confidentiality and security measures to protect electronic health information.

2. Protect data integrity and validity using software or hardware technology.

3. Implement and monitor department and organizational data and information system security policies.

4. Recommend elements that must be included in the design of audit trail and data quality monitoring programs.

5. Recommend elements that should be included in the design and

(storage media, query tools/applications, data mining, report design, search engines) (5)

- Data security (protection methods—physical, technical, managerial, risk assessment, audit and control program, contingency planning, data recovery, Internet, web-based, and e-Health security) (5)

Applied Health Informatics

- Leading development of health information resources and systems (4)

- Brokering of information services (5)

- Clinical, business and specialty systems applications (administrative, clinical decision support systems, electronic health record and computer-based health record systems, nursing, ancillary service systems, patient numbering systems at master and enterprise levels) (5)

- Systems development (planning, analysis and design, customization, selection/procurement, implementation, integration,
implement risk assessment, contingency planning, and data recovery procedures.

E. Subdomain: Healthcare Information Systems

1. Compare and contrast the various clinical, administrative, and specialty service applications used in healthcare organizations.

2. Apply appropriate systems life cycle concepts, including systems analysis, design, implementation, evaluation, and maintenance to selection of healthcare information systems.

3. Facilitate project management by integrating work efforts and planning and executing project tasks and activities.

4. Formulate the planning, design, selection, implementation, integration, testing, evaluation, and support for organization-wide support, testing and evaluation, auditing and monitoring (5)

• Human factors and user interface design (4)
• Systems Life Cycle (systems analysis, design, implementation, evaluation, and maintenance) (5)
information systems.
5. Apply ergonomic and human factors in interface design.

V. Domain: Organization and Management

A. Subdomain: Human Resources Management
1. Manage human resources to facilitate staff recruitment, retention, and supervision.
2. Ensure compliance with employment laws
3. Develop and implement new staff orientation and training programs.
4. Develop and implement continuing education programs.
5. Develop productivity standards for health
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information functions.  
6. Monitor staffing levels and productivity and provide feedback to staff regarding performance.  
7. Benchmark staff performance data.  
8. Develop, motivate, and support work teams.  

B. Subdomain: Financial and Resource Management  
1. Demonstrate knowledge of financial management and accounting principles.  
2. Prepare and monitor budgets and contracts.  
3. Demonstrate and apply knowledge of cost-benefit analysis techniques to justify resource needs.  
4. Manage organization-wide coding and revenue cycle processes.  

C. Subdomain: Strategic Planning and Organizational Development  

Organization and Management  
- Principles of management (5)  
- Negotiation techniques (4)  
- Communication and interpersonal skills (5)  
- Team/consensus building (5)  
- Professional development for self and staff (4)  
- Problem solving and decision making processes (5)  

Human Resources Management  
- Employment laws (4)  
- Principles of human resources management (recruitment, supervision, retention, counseling, disciplinary action) (5)
1. Develop strategic and operational plans for facility-wide information systems.
2. Assess organization-wide information needs.
3. Facilitate retrieval, interpretation, and presentation of data/information appropriate to user needs.
4. Demonstrate and apply principles of organization behavior to facilitate team building, negotiation, and change management.

D. Subdomain: Project and Operations Management
1. Apply general principles of management in the administration of health information services.
2. Assign projects and tasks to appropriate staff.
3. Implement process engineering and project management techniques to ensure efficient workflow and appropriate outcomes.

- Workforce education and training (4)
- Performance standards (5)

Financial and Resource Management
- Healthcare finance (payer mix, bond rating, investment, capitalization) (3)
- Accounting principles (4)
- Budget process (capital and operating ) (5)
- Cost/benefit analysis (5)

Strategic Planning and Organizational Development
- Strategic leadership, management and planning (4)
- Organizational behavior (4)
- Business building (entrepreneurialism – building your own business; entrepreneurialism – championing best practices,
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<th>Processes, Services Within Your Organization</th>
<th>Change Management</th>
<th>Organizational Assessment and Benchmarking</th>
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<td>Process reengineering and work redesign</td>
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<td>Project management</td>
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<td>Anatomy</td>
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<td>Pathophysiology</td>
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<td>Pharmacotherapy</td>
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<thead>
<tr>
<th>Bloom’s Taxonomy</th>
<th>Explanation</th>
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| 1 = Knowledge: The remembering (or recalling) of appropriate, and previously learned information | • Observation & recalling information  
• Classifications & categories (of major ideas)  
• Knowledge of major principles and theories of subject matter  
• *Learning objectives phrasing:* list, define, describe, identify, match, select, label, reproduce, state |
| 2 = Comprehension: Grasping the meaning of information | • Translate knowledge into a new context  
• Interpret facts, infer causes  
• Predict consequences  
• *Learning objectives phrasing:* convert, discuss, estimate, explain, generalize, give examples, restate in own words, summarize, distinguish, differentiate, interpret |
| 3 = Application: Applying previously learned information to new situations to solve problems | • Identify the best answer  
• Solve problems using required skills or knowledge  
• Determine, discover, assess, articulate  
• *Learning objectives phrasing:* apply, demonstrate, calculate, solve, modify, change, classify, discover, solve, teach, utilize |
<p>|  | • Break down, differentiate, discriminate |</p>
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<tr>
<th>Level</th>
<th>Description</th>
<th>Learning Objectives Phrasing</th>
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<tr>
<td>4 = Analysis</td>
<td>Breaking down information and inferring (or finding evidence) to support divergent conclusions</td>
<td>Recognize, infer, point out, Illustrate, outline, prioritize, <em>Learning objectives phrasing:</em> diagram, distinguish, organize parts, recognize hidden meanings, identify components, arrange, select, explain, infer, prioritize</td>
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<tr>
<td>5 = Synthesis</td>
<td>Applying prior knowledge and skills to create a new or original whole</td>
<td>Use old ideas to create new ones, Predict and draw conclusions, Adapting divergent knowledge toward a new synthesis, <em>Learning objectives phrasing:</em> adapt, anticipate, collaborate, combine, compare, compose, design, devise, facilitate, negotiate, reconstruct, reorganize, substitute, revise, design, invent</td>
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<td>6 = Evaluation</td>
<td>Judging the value of material based on personal values and opinions resulting in an end product</td>
<td>Assess value of theories and presentations, Make choices based on reasoned argument, Verify the value of evidence presented, <em>Learning objectives phrasing:</em> Appraise, decide, recommend, convince, judge, support, conclude, critique, defend, reframe</td>
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