Entry-to-Practice Competencies for Health Data and Information Management Professionals and Leaders

Master Degree
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Unit 1: Applied Sciences

1.1 Present written and oral communication using a scholarly tone, demonstrating critical analysis and emotional intelligence.
   1.1.1 Ensure thorough and logical explanations are founded on evidence-based information.
   1.1.2 Select or develop graphical representations and images to enhance communications and demonstrate critical analysis.
   1.1.3 Explain more complex ideas at a greater depth, presenting objective analysis and findings.
   1.1.4 Apply knowledge of medical terminology to support information literacy.

1.2 Use technology to attain and communicate information.
   1.2.1 Use digital technology, networks, and communication tools to find, evaluate, and communicate information.
   1.2.2 Use software packages that allow for the analysis and presentation of the data.

1.3 Apply knowledge of health sciences.
   1.3.1 Demonstrate knowledge of anatomy and physiology.
   1.3.2 Demonstrate knowledge of pathophysiology and pharmacology.

1.4 Recognize the evolution and trends in the delivery of healthcare services in various settings.
   1.4.1 Identify types of healthcare organizations and systems.
   1.4.2 Recognize the scope of healthcare services in various settings.
   1.4.3 Differentiate the scope of practice of health professionals and healthcare services in various settings.

1.5 Apply advanced descriptive and biostatistical concepts and interpret data sets using analytical tools.
   1.5.1 Apply knowledge of descriptive statistical methods for continuous and categorical data.
   1.5.2 Choose the appropriate statistical method and perform statistical analysis.
   1.5.3 Calculate statistics, solve statistical questions, and examine or predict errors.
   1.5.4 Distinguish between descriptive and inferential statistics.
   1.5.5 Conduct exploratory data analysis, hypothesis testing, t-testing, chi-square, correlation and regression studies.
   1.5.6 Analyze samplings to make predictions about larger populations.
   1.5.7 Interpret data and communicate results to various audiences.
1.6 Use a systematic approach to collecting, analyzing, and interpreting determinants of health and population health data.

1.6.1 Apply knowledge of epidemiology, human and environmental biology and behavioral sciences when collecting and analyzing data.

1.6.2 Examine how the determinants of health influence population health and well-being of individuals, groups, communities, and populations.

1.6.3 Articulate factors that influence local, state, national, and global health and social legislation and policy.

1.6.4 Examine the trends and current issues that impact community, population and global health, including new and reemerging diseases that spread through immigration, travel and international trade.

1.6.5 Examine patterns of illness and injury in populations to prevent and control health problems.

Unit 2: Professionalism

2.1 Lead advocacy efforts to advance the profession and support the integration of HIM into the organization.

2.1.1 Advocate for health information services and resources that benefit patients, the organization and the population.

2.1.2 Educate others on the scope of practice and role of health information management professions.

2.1.3 Advocate for mandated changes in health data reporting that facilitate accuracy and financial stability.

2.1.4 Engage in policy advocacy efforts.

2.1.5 Write proposals for equipment, resources, and new technologies.

2.1.6 Establish relationships with local and state legislative bodies.

2.1.7 Advocate for mandated changes in health data reporting that facilitate accurate data reporting and financial stability.

2.2 Engage in self-reflection and cultural humility to improve practice.

2.2.1 Self-reflect on experiences and personal opinions, learn from others and identify growth areas.

2.2.2 Recognize when services are beyond personal competence and consult or refer services to others.

2.2.3 Consider the relationship between the health information management role and the responsibilities of other team members.

2.2.4 Engage in continuing education and professional development.
2.3 Foster an environment that encourages ethical behavior.
   2.3.1 Identify and manage potential and actual conflicts of interest.
   2.3.2 Align activities to the organization’s mission, vision, and values.
   2.3.3 Navigate organizational culture to address issues and gain opportunities.

2.4 Apply ethical frameworks to support decision-making and to guide others to resolve ethical issues.
   2.4.1 Apply bioethics to identify and critically analyze moral questions and to manage ethical dilemmas.
   2.4.2 Evaluate and apply ethical frameworks to provide professional guidance.

Unit 3: Health Law and Policy

3.1 Analyze the impact of legislation, regulations, licensure and accreditation on the organization.
   3.1.1 Compare federal, state, and local legislation, identify contradictions, and make recommendations to address discrepancies.
   3.1.2 Identify and address complex policy challenges, citing legislation and regulations.
   3.1.3 Interpret licensure and accreditation standards that impact health information management.
   3.1.4 Identify legal liability and make recommendations to address legal issues.
   3.1.5 Create and implement a plan to mitigate organizational liability.

3.2 Lead activities that support compliance with privacy, security and confidentiality legislation and regulations.
   3.2.1 Create policies and procedures aligned with privacy and confidentiality legislation.
   3.2.2 Conduct a security risk analysis and make recommendations to decrease or mitigate risks.
   3.2.3 Identify potential and real cyber security risks and define processes to mitigate risk and a contingency plan to address occurrence.
   3.2.4 Utilize findings of privacy breaches to develop protocols to mitigate future risks and support transparency.
   3.2.5 Develop and implement a health information compliance plan aligned with legislation and regulations.

3.3 Lead activities that address healthcare fraud and abuse.
   3.3.1 Analyze data to identify trends, patterns and root causes of intentional or unintentional financial abuse.
3.3.2 Create reports that justify concerns or allegations of intentional or unintentional healthcare fraud or abuse.

3.3.3 Create policies and procedures that address reporting requirements associated with healthcare fraud and abuse.

3.3.4 Articulate strategies to monitor, report on, and address healthcare fraud and abuse.

3.4 Ensure compliance with federal reporting requirements.

3.4.1 Analyze vital statistics and notifiable disease, abuse, and death data to confirm compliance with governmental regulations.

3.4.2 Analyze physician and practitioner data to evaluate compliance with state regulatory, credentialing, and licensure requirements.

3.4.3 Develop an improvement compliance plan.

**Unit 4: Data Management**

4.1 Oversee health information management and other digital administrative systems.

4.1.1 Apply understanding of the health record life cycle.

4.1.2 Create policies and document procedures to guide compliance with regulatory and accreditation requirements.

4.1.3 Evaluate digital systems and make recommendations to enhance compliance with regulatory and accreditation requirements and to increase return on investment and user satisfaction.

4.2 Lead inter-department procurement, design and implementation of data interfaces, digital systems, or technologies.

4.2.1 Identify health record requirements for various types and sizes of health organizations, including virtual environments.

4.2.2 Evaluate various systems to identify the potential impact of interoperability, data exchange, data integrity and compliance with regulatory requirements and processes.

4.2.3 Construct and map EHR components and integration requirements for software applications in the electronic health record.

4.2.4 Design requirements for interoperability and process improvement to ensure patient documentation is available.

4.2.5 Design and test data requirements for interfaces to integrate data across health information systems internally and externally.

4.2.6 Map electronic health record components and software integration data elements to ensure seamless data exchange.
4.2.7 Create a detailed workflow diagram showing the release of patient information process to external healthcare providers.

4.3 Lead system configuration activities following interoperability standards to ensure data sharing across disparate systems.

4.3.1 Apply system configuration practices to optimize the safe use of electronic health records.

4.3.2 Evaluate system configuration needs to create an accurate snapshot of the organization's electronic health records configuration status.

4.3.3 Complete interoperability needs analysis to ensure data integration is seamless.

4.3.4 Anticipate and plan for changes in policies and procedures related to implementing a new system.

4.3.5 Engage in the reconciliation of data to ensure accurate data sharing.

4.4 Use, evaluate and support the development of artificial intelligence (AI) applications.

4.4.1 Use advanced technology, digital applications, and tools and recommend innovative uses for managing and analyzing data and information.

4.4.2 Examine the trends, applications, benefits, and risks of AI and machine learning.

4.4.3 Identify the ethical implications of using artificial intelligence in healthcare operations.

4.4.4 Validate the authenticity and reliability of the data generated by artificial intelligence or other advanced technologies.

4.4.5 Audit data generated from artificial intelligence and advanced technologies.

4.4.6 Apply knowledge of AI mechanics and algorithms and make recommendations to improve outcomes.

Unit 5: Informatics and Data Analytics

5.1 Design and develop databases to meet the organization's needs and regulatory requirements.

5.1.1 Create physical and logical relationship diagrams for the database function.

5.1.2 Maintain large databases, make queries, and provide expertise on updates or changes in the database.

5.1.3 Query databases to search for, compile and modify data sets.

5.1.4 Integrate data from multiple sources into a single database.
5.2 Acquire and manage clinical, financial, surveillance or administration data from electronic systems, portals, mobile applications, and artificial intelligence.

5.2.1 Determine appropriate data collection methods considering end-user perspectives and needs.

5.2.2 Acquire data from databases and different data sources through a single query and reporting interface.

5.2.3 Use advanced techniques to conduct queries, including views, transactions, stored procedures, and joins.

5.3 Conduct descriptive, diagnostic and predictive analytics.

5.3.1 Evaluate data to ensure the application of statistical formulas in computing healthcare statistics.

5.3.2 Identify data type and appropriate statistical application for the analysis.

5.3.3 Use software and digital applications to perform a variety of data analyses.

5.3.4 Interpret, calculate, and summarize data using various analytic and digital applications.

5.3.5 Use data mining and predictive modelling.

5.3.6 Interpret, calculate, and summarize data for benchmarking, consumer or research purposes.

5.4 Interpret public health surveillance (BRFSS, YRBS) data to inform decisions and policies.

5.4.1 Apply data analytics to identify the frequency and patterns of disease, health issues, and risks in various regions and environmental conditions.

5.4.2 Apply biostatistical research methods to uncover disease patterns, causes and effects.

5.4.3 Acquire skills in statistical and epidemiological software applications.

5.5 Present data in a way that influences decisions, policies, and care delivery models.

5.5.1 Choose the type of visualization based on the audience and data set.

5.5.2 Ensure correct data presentation to support accurate conclusions.

5.5.3 Use various data analytic tools to create a visual display of data.

5.5.4 Write a comprehensive report to inform decisions.

5.6 Assess the impact of interoperability on business and clinical processes and integrate data with health database systems.

5.6.1 Develop strategies to achieve data integrity with data governance standards.

5.6.2 Create an implementation plan considering the various departments and organizations impacted by the system.
Unit 6: Clinical Coding

6.1 Analyze the integration of coded data and the downstream utilization.
   6.1.1 Research the development of coding technologies and advocate for implementation.
   6.1.2 Leverage artificial intelligence to improve code capture for optimal financial reimbursement.
   6.1.3 Revise or develop coding sets, classification systems, methodologies and approaches to validate and ensure the reliability of data stratification.

Unit 7: Financial and Revenue Cycle Management

7.1 Lead the reimbursement and financial system operations.
   7.1.1 Examine revenue life-cycle management processes to ensure efficient payment system operation throughout the continuum of care.
   7.1.2 Identify the broad financial constraints facing health systems.
   7.1.3 Analyze and respond to the impact of financial policy and regulations.
   7.1.4 Manage payer contracts agreements, including health insurance, managed care organizations, and government-sponsored healthcare programs.

7.2 Examine revenue integrity practices and recommend revenue capture opportunities and financial risk reduction strategies.
   7.2.1 Examine how costs and margins are measured and reported.
   7.2.2 Analyze claims data, billing denials, and appeals to determine root causes and recommend mitigation strategies.
   7.2.3 Analyze financial and administrative queries for benchmarking and performance indicators.
   7.2.4 Develop a comprehensive cost model capturing cost components, drivers and causal factors to eliminate unnecessary costs and enhance overall profitability.
   7.2.5 Create data claim reports presenting data to justify conclusions and propose solutions to mitigate risks and loss.

7.3 Develop a business case with robust analysis and justification to advance or adjust strategic initiatives.
   7.3.1 Detail the cost breakdown, revenue and net impact of the investment.
   7.3.2 Conduct a return-on-investment analysis considering alternatives and value to the organization and other partners.
7.3.3 Identify and examine the benefits and risks involved in proceeding or not proceeding with the business model.

7.3.4 Present the business case in a way that is defensible to the decision-makers.

Unit 8: Quality, Risk Management and Safety

8.1 Lead continuous quality improvement and total quality management activities to analyze and monitor healthcare services' quality, effectiveness and efficiency.

8.1.1 Identify performance monitoring needs to support total quality management and continuous quality improvement initiatives.

8.1.2 Select performance measures to track and analyze trends and areas of improvement.

8.1.3 Retrieve and analyze clinical quality measures to assess patient treatment quality and drive clinical action.

8.1.4 Define financial indicators to monitor and analyze the organization's financial status.

8.1.5 Develop and implement an evaluation plan considering various models and make recommendations based on the analysis.

8.1.6 Explore using advanced technology to predict quality issues and automate continuous improvement processes.

8.1.7 Generate quality management reports, making data-driven recommendations and decisions. Develop and implement continuous quality management or improvement plans.

8.2 Conduct a risk analysis and prepare a report to support mitigating risks, adverse events and safety issues.

8.2.1 Determine potential root causes of systems errors and recommend risk reduction measures to achieve improved outcomes.

8.2.2 Identify risk management reporting tools and software.

8.2.3 Develop strategies for minimizing or mitigating risks of unauthorized release of information, fraudulent behavior, and documentation or coding errors and omissions that may result in financial implications.

8.3 Design quality models to identify compliance and performance issues and risks.

8.3.1 Identify quality factors, criteria and metrics based on the identified evaluation goals or quality requirements.

8.3.2 Apply quality models to design quality monitoring programs.

8.3.3 Analyze revenue data from billing audits to identify omissions, fraudulent, or abusive activities for healthcare compliance.

8.3.4 Interpret accreditation agency survey findings and prioritize corrective action.
8.3.5 Interpret accreditation agency survey findings and prioritize corrective action.
8.3.6 Develop education materials to inform others of relevant health information management legislation, regulations and policies.
8.3.7 Document compliance activities, including risk analyses, work and audit plans, corrective actions, and results.

8.4 **Apply human system analysis frameworks to identify problems and to co-create solutions.**

8.4.1 Conduct human or soft system analysis to identify a problematic social situation and solutions in business applications or systems.
8.4.2 Analyze internal and external factors that may affect business, performance and services.
8.4.3 Apply change management principles to facilitate organizational or departmental process improvement initiatives.
8.4.4 Collaborate with internal and external partners to co-create solutions and change management plans.

**Unit 9: Operational Management**

9.1 **Conduct business and provide services in a virtual environment.**

9.1.1 Interact with people virtually in their communities and other regions, states or nations.
9.1.2 Establish a contingency plan anticipating potential technology, internet or electricity failure or other equality issues.
9.1.3 Take steps to ensure unauthorized access to the session and the privacy and confidentiality of personal health information.
9.1.4 Apply advanced communication skills, including creating and using visuals to support transparent, engaging, and accessible interactions.
9.1.5 Apply time management skills and productivity principles to ensure a conducive virtual environment.

9.2 **Create and manage department, programs or organizational budgets.**

9.2.1 Identify the broad financial constraints facing health systems and the basics of good financial stewardship.
9.2.2 Apply knowledge of various financial statements such as balance sheets, profit and loss statements and cost reports.
9.2.3 Compare capital budgeting models and the long-term benefits to health systems.
9.2.4 Examine how cost margins are measured and reported in the healthcare context.
9.2.5 Apply financial ratios using financial analytic tools to determine the department or organization's financial health.
9.3 Engage in human resource activities to support the competent and productive performance of others.

9.3.1 Apply time management principles to monitor and enhance personal productivity and the productivity of others.

9.3.2 Set and monitor clear targets for team members, departments and the organization aligned with common objectives and goals.

9.3.3 Apply employment legislation and articulate risks associated with noncompliance.

9.3.4 Assign responsibilities to various team members according to the scope of practice and competence.

Unit 10: Leadership

10.1 Apply leadership theories and inclusive leadership behaviors to guide services, encourage productivity and co-create partnerships.

10.1.1 Compare leadership theories and analyze the validity and application of the approaches in various situations.

10.1.2 Engage in inclusive leadership through co-creating common goals with diverse groups.

10.1.3 Build confidence and capacity in individuals and team members through leadership, coaching and mentoring.

10.1.4 Manage unfamiliar, complex, or unpredictable situations and pivot when needed.

10.1.5 Model ethical interpersonal and transparent communication skills in complex situations.

10.2 Create opportunities for interprofessional collaboration to achieve common goals.

10.2.1 Lead inter- and intra-professional collaboration to achieve common goals and shared vision.

10.2.2 Facilitate constructive interactions with team members and internal and external partners.

10.2.3 Recognize interprofessional dynamics and their influence on HIM processes.

10.2.4 Act as a mentor to support the professional growth and competence of others.

10.2.5 Co-create culturally safe environments to promote authentic relationships.

10.2.6 Navigate political and cultural systems within an organization to achieve a specific goal efficiently and effectively.

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10.3 Investigate world views by examining local, global, and cultural issues.
   10.3.1 Consider the perspectives and world views of other communities and populations.
   10.3.2 Share ideas effectively with diverse audiences by engaging in open, appropriate, and effective interactions across cultures.
   10.3.3 Engage in collective well-being and sustainable development both locally and globally.

10.4 Use critical inquiry and emotional intelligence to address challenges and opportunities.
   10.4.1 Engage in critical inquiry to challenge practice and the status quo.
   10.4.2 Use emotional intelligence to resolve disputes, conflicts, and impasses.
   10.4.3 Apply cognitive and non-cognitive attributes to address situations (e.g., emotional, social and cultural intelligence, self-regulation, and self-awareness).
   10.4.4 Apply conflict resolution practices during difficult situations or crucial conversations.
   10.4.5 Integrate evidence-informed practice, research principles and critical thinking into practice.
   10.4.6 Articulate situational, emotional and cultural awareness when critically analyzing individual, team, and organizational functioning.

10.5 Apply project management skills and principles to achieve project goals and objectives within scope.
   10.5.1 Engage in strategic planning and goal and object setting.
   10.5.2 Create a project Charter and outline the project scope.
   10.5.3 Develop detailed project plans, including budgets, schedules, and timelines.
   10.5.4 Use predictive, agile and hybrid approaches to meet project requirements and goals.
   10.5.5 Identify and track potential and actual risks to the project and organization.
   10.5.6 Prepare and deliver business communications such as meeting agendas, presentations, business reports and project communication plans.

Unit 11: Research, Education and Scholarly Activities

11.1 Apply current research and evidence-informed practice to services.
   11.1.1 Determine the validity, reliability, and credibility of the information and research.
   11.1.2 Analyze the research studies to determine the accuracy of the data analytics.

11.2 Lead research activities to support knowledge translation.
   11.2.1 Differentiate among research methodologies, including qualitative, quantitative and mixed methodologies.
11.2.2 Articulate a research question and formulate a hypothesis.
11.2.3 Apply human subject protection requirements, navigate ethical issues, and comply with legal and regulatory requirements.
11.2.4 Engage in grant writing and IRB processes.
11.2.5 Identify steps associated with conducting clinical trials and explore ethical issues.
11.2.6 Collect, code, retrieve and export research data.
11.2.7 Analyze research data by performing statistical and qualitative analysis.
11.2.8 Synthesize and interpret research findings to draw valid conclusions and create an evidence-based argument.

11.3 Design and deliver education and training materials to support knowledge translation.
11.3.1 Apply learning theories and universal design for learning principles when planning, developing and delivering education and training materials.
11.3.2 Use technology or digital applications to create learning activities, assessments or training material.

11.4 Engage in scholarly activities.
11.4.1 Disseminate scholarly findings to inform advancement in health information.
11.4.2 Apply knowledge of publishing requirements for disseminating knowledge and research.