Digital Health
CANADA

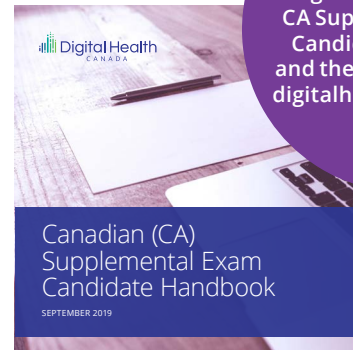# Competency
Requirements

EXAM VERSION | NOVEMBER 2019

Purpose

Digital Health Canada Competency Requirements (Exam Version) clearly identifies the knowledge and skill requirements within seven of the nine domains presented in the Digital Health Canada Career Matrix.

The requirements found within each of these five domains are used to develop questions for the Canadian Supplemental (CA) exam that is administered in conjunction with the Certified Professional in Health Information Management and Systems (CPHIMS) exam. The CPHIMS-CA exam sets the standard of knowledge and experience for those at the proficient, expert or master levels of the Digital Health Canada Career Matrix.

The purpose of this resource is to help individuals identify potential knowledge or skills gaps that may be tested on the exam. They are numbered to map out to the appropriate domain questions within the examination form and can be used with the CA Candidate Handbook.

Download the Digital Health Canada CA Supplemental Exam Candidate Handbook and the Career Matrix at digitalhealthcanada.com

A1: Information Management

1. Advances the management, measurement and delivery of information as a key strategic resource.

2. Demonstrates an understanding of the key attributes of data and information (e.g. quality, integrity, accuracy timeliness, appropriateness) and their limitations within the context of intended uses).

3. Determines appropriate data sources and gaps in data sources in relation to identified business needs across the healthcare system.

4. Demonstrates an understanding of system integration and clinical workflow among health information systems (e.g. decision support systems, electronic health records, order entry, registries, etc.).

5. Demonstrates an understanding of the implications of ethical, legislative, and regulatory requirements related to the management of health information.

6. Applies accepted policies, principles and guidelines for the management of health information (e.g. Digital Health Canada Guidelines and Canadian Health Information Management Association Practices, business intelligence, data security, etc.).

7. Demonstrates an understanding of relevant health information standards and their appropriate use (e.g. classifications, nomenclature, interoperability, standards, messaging, terminology, etc.).

8. Integrates data quality principles and methodologies into the identification, use, management and reporting of information sources (people and systems).

9. Demonstrates an understanding of the principles of good information governance.

10. Demonstrates an understanding of privacy, security and confidentiality concepts and the role they play in building and maintaining trust in the system to protect personal health information.

11. Demonstrates an understanding of existing privacy frameworks and how to apply them to projects (e.g. strengths and weaknesses of these frameworks).

12. Demonstrates the ability to identify the type of roles in the Information Management domain (Chief Information Officer, Chief Technology Officer, Chief Nursing Informatics Officer, Chief Privacy Officer, etc.).

13. Demonstrates an understanding of the data interrelationships and dependencies among the various health information systems (e.g. decision support systems, electronic health records, order entry, registries, etc).

A2: Technology Ecosystem

1. Demonstrates an understanding of key technology concepts and components (e.g., networks, storage devices, operating systems, information retrieval, data warehousing, applications, firewalls, cloud, fog computing, etc.).

2. Engages relevant stakeholders at the appropriate stages of the system life cycle.

3. Addresses information, business, and technical requirements to meet the full range of stakeholders' information needs.

4. Contributes to the selection and utilization of appropriate information technologies to meet business requirements.

5. Applies appropriate health informatics standards and enterprise models to enable system interoperability (e.g., terminology, data structure, system to system communication, privacy, security, safety, governance).

6. Applies technology best practices (e.g., quality management systems, testing, service level agreements, business continuity, incident management, application management services (AMS), service level agreements (SLA), business continuity plans, incident management, system testing and upgrading) throughout the system life cycle.

7. Applies best practices and solutions required to manage the security of data, systems, devices and networks. (e.g. Digital Health Canada Guidelines for the Protection of Health Information).

8. Demonstrates an appreciation for the interoperability challenges that exist in healthcare and the implications of these challenges to delivering quality health care.

9. Demonstrates an understanding of emerging technologies and their impact on healthcare including addressing the interoperability challenges to sharing health data among systems and providers.

10. Promotes the appropriate use of health information technologies to ensure patient safety.

B3: Clinical & Health Services

1. Applies knowledge of basic clinical concepts, clinical care processes, technologies and workflow for purposes of analysis, design, development and implementation of health information systems and applications.

2. Understands basic clinical terminology and commonly used abbreviations and acronyms.

3. Recognizes commonly used formats, structures and methods for recording and communicating clinical data and how these are incorporated into system and application use.

4. Fosters the adoption and use of health information systems in and across clinical settings

5. Knowledge of current and evolving technologies that allow patients to contribute and control access to their own records and improve patient experiences and engagement (e.g. patient portals, personal health records, wearable tech).

6. Assesses and mitigates clinical safety risks associated with health information and systems throughout the system life cycle using appropriate tools, policies and procedures (e.g. eHealth Safety Guidelines).

7. Facilitates clinicians' use of electronic decision support tools in accessing evidence to support practice (e.g. clinical decision support, closed-loop medical administration).

8. Demonstrates an understanding of key ethical concepts and health informatics frameworks as they apply to health informatics clinical care (e.g. privacy bias in algorithms, surveillance).

9. Fosters the adoption of person centric, family/community care, in order to facilitate the collaboration amongst consumers and providers.

10. Understands emerging trends and issues in health and the delivery of health services.

11. Understands behavioural factors (e.g. benefits of, how to keep patients engaged) of consumer engagement in healthcare.

B4: Canadian Health System

1. Demonstrates knowledge of health and health systems in Canada and appropriately applies this information to work products and services, including:
   a. Key characteristics (e.g. governance, funding, structures, related organizations, emerging trends, etc.)
   b. Determinants of health (e.g. environment, genetics, socioeconomic), and
   c. Key factors affecting healthcare (e.g., demographics, new technologies, incentives).
   d. Understanding basic Health informatics associations across Canada (e.g. Digital Health Canada, Canadian Nursing Informatics Association, Information Technology Association of Canada, Canadian Institute for Health Information, Infoway, etc.)
   e. Understanding the cultural and community context of care access and delivery

2. Demonstrates knowledge of the way HI benefits are realized and measured in the Canadian healthcare system.

3. Demonstrates an understanding of different types of Canadian healthcare delivery models across the continuum of care and their interrelationships (e.g. hospitals, clinics, ambulatory centres and community health agencies, regional health authorities).

4. Demonstrates knowledge of strengths and weaknesses of how people, resources and information flow through the health system and key drivers (e.g. chronic disease management).

5. Applies knowledge of the roles and relationships of health professionals, along with the organizational and regulatory structure in which they work.

6. Addresses the challenges related to the adoption and realization of clinical value of information systems in the health sector.

7. Understands emerging needs and approaches to including the privacy of personal health information while improving care delivery and managing health systems (e.g. Ontario Coalition Against Poverty).

8. Promotes the safe and appropriate use of health information technologies to ensure patient safety.

C5: Healthcare Transformation

1. Applies the basic theories, concepts and practices of management including:
   a. Organizational behaviour and culture
   b. Human resources
   c. Financial and budget management
   d. Governance, accountability, risk analysis and management
   e. Procurement and vendor relationships, and
   f. Customer relationships

2. Contributes to organizational plans and strategies to ensure that information and systems enable business goals and strategy.

3. Promotes and nurtures an information culture by facilitating appropriate uses of information and knowledge.

4. Facilitates self, individual, team and organizational learning and development through the use of appropriate technologies, communication channels and organizational skills.

5. Communicates using audience-appropriate materials and language to present information and convey concepts to relevant stakeholders.

6. Applies best practices in quality improvement and process improvement and process engineering to facilitate business and clinical transformation.

7. Contributes to ongoing evaluation (including economic evaluation) of effectiveness and sustainability of systems so that they can evolve to support best practice in clinical care.

8. Applies best practices of change management in the implementation of new processes or systems.

9. Fosters the adoption and use of health information systems in clinical settings.

C6: Project Management

1. Applies current project management principles and best practices (e.g. project charter, scope, lifecycle, budgets, resourcing, timelines, milestones, monitoring, status reports).

2. Works collaboratively and contributes to project planning, implementation, monitoring and evaluation.

3. Anticipates issues and opportunities and mitigates risks associated with projects.

Digital Health Canada connects, inspires, and educates the digital health professionals creating the future of health in Canada. Our members are a diverse community of accomplished, influential professionals working to make a difference in advancing healthcare through information and technology. Digital Health Canada fosters network growth and connection; brings together ideas from multiple segments for incubation and advocacy; supports members through professional development at the individual and organizational level; and advocates for the Canadian digital health industry.

For more information, visit **digitalhealthcanada.com.**

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