



# Competency Requirements

HEALTH INFORMATICS PROFESSIONAL (HIP®) VERSION | NOVEMBER 2019

# Purpose

The Digital Health Canada Competency Requirements (HIP® Version) clearly identifies the knowledge and skill requirements within seven of the nine domains that are presented in the Digital Health Canada Career Matrix. The requirements found within each of these seven domains can be used by health informatics professionals planning career advancement and human resources professionals looking for hiring guidance. Competencies around the two emerging domains are being created as these new roles evolve.

For those looking to prepare for the Canadian Supplemental (CA) exam (administered in conjunction with the Certified Professional in Health Information Management and Systems (CPHIMS) exam), please refer to the Digital Health Canada Competency Requirements (Exam Version). The Exam Version has numbered competencies to map out to the appropriate domain questions within the examination form and can be used with the CA Exam Candidate Handbook.

Download the  
Digital Health Canada  
Competency Requirements  
(Exam Version)  
and the Career Matrix at  
[digitalhealthcanada.com](http://digitalhealthcanada.com)



Digital Health Canada Professional Career Matrix | November 2019

The Digital Health Canada Professional Career Matrix clearly identifies career paths and opportunities across nine unique domains and five proficiency levels within the digital health sector. The Career Matrix highlights potential roles within each domain and the level of experience each role may require. Individuals can map out their current position on the Career Matrix and understand the skills and experience required to chart a career path vertically or horizontally through the Career Matrix as desired. The Career Matrix domains and proficiency levels are based on a blend of practical, theory and high-level job tasks identified by Digital Health Canada faculty members and digital health industry leaders with extensive prior experience. Please note:

- A range of education (e.g. degree, diploma, certification) can be combined with the Trade and Abilities and Professional Experience presented below to manage through the Career Matrix.
- Achieving the Certified Professional in Healthcare Information and Management Systems Canada (CPHIMS-CA) credential is useful for moving through the matrix at the proficient, expert, and master levels.
- Titles listed in the Career Matrix represent a sample of possible roles available within the domain; the education and skills outlined here are a guideline and do not guarantee achievement of any particular role, job, or title.

MASTERY LEVEL	EXPERT LEVEL	PROFICIENT LEVEL	COMPETENT LEVEL	EMERGING PROFESSIONAL (PI) LEVEL
10+ years of professional experience*	10+ years of professional experience	5+ years of professional experience	3+ years of professional experience	1+ years of professional experience
Mastery is about designing the future and leading change. Tend to be senior leadership positions in organizations. Leadership ability and other personal characteristics differentiate Masters and Expert.	Optimal performance becomes second nature. Draws on experience to immediately produce an intuitively appropriate action to any situation.	Understanding of skill or domain to an extent of intuition. Performs a complete system instead of a set of different parts. Understands that multiple competing solutions exist for each problem. Can make correct decisions based on instinct.	Sees patterns and principles rather than a discrete set of rules. Decisions are based on experience and active decision-making. Accountable for decisions. Consistently experiences coping with real situations.	Rules based, but able to selectively apply different rules as needed. Can follow instructions containing decision points. Limited experience, especially in the health informatics sector.

\*Please Note: The minimum number of years of professional experience is based on the level of education and certification. For example, a person with a degree and certification may require less than 10 years of professional experience to reach the Mastery level.

## A1: Information Management

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- 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).
  - 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.).
  - Demonstrates an understanding of the implications of ethical, legislative, and regulatory requirements related to the management of health information.
  - Demonstrates an understanding of relevant health information standards and their appropriate use (e.g. classifications, nomenclature, interoperability, standards, messaging, terminology, etc.).
  - Demonstrates an understanding of the principles of good information governance.
  - 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.
  - Demonstrates an understanding of existing privacy frameworks and how to apply them to projects (e.g. strengths and weaknesses of these frameworks).
  - 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.).
  - 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).
  - Determines appropriate data sources and gaps in data sources in relation to identified business needs across the healthcare system.
  - Integrates data quality principles and methodologies into the identification, use, management and reporting of information sources (people and systems).
  - 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.).
  - Advances the management, measurement and delivery of information as a key strategic resource.
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## A2: Technology Ecosystem

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- Demonstrates an appreciation for the interoperability challenges that exist in healthcare and the implications of these challenges to delivering quality health care.
  - Demonstrates an understanding of emerging technologies and their impact on healthcare including addressing the interoperability challenges to sharing health data among systems and providers.
  - Demonstrates an understanding of key technology concepts and components (e.g., networks, storage devices, operating systems, information retrieval, data warehousing, applications, firewalls, cloud, FOG, etc.).
  - Addresses information, business, and technical requirements to meet the full range of stakeholders' information needs.
  - Engages relevant stakeholders at the appropriate stages of the system life cycle.
  - 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).
  - 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.
  - Applies best practises 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).
  - Contributes to the selection and utilization of appropriate information technologies to meet business requirements.
  - Promotes the appropriate use of health information technologies to ensure patient safety.
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## B3: Clinical & Health Services

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- Recognizes commonly used formats, structures and methods for recording and communicating clinical data and how these are incorporated into system and application use.
  - 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).
  - 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).
  - Understands emerging trends and issues in health and the delivery of health services.
  - Understands behavioural factors (e.g. benefits of, how to keep patients engaged) of consumer engagement in healthcare.
  - Understands basic clinical terminology and commonly used abbreviations and acronyms.
  - 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).
  - 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.
  - Fosters the adoption and use of health information systems in and across clinical settings.
  - Fosters the adoption of person centric, family/community care, in order to facilitate the collaboration amongst consumers and providers.
  - Facilitates clinicians' use of electronic decision support tools in accessing evidence to support practice (e.g. clinical decision support, closed-loop medical administration).
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## B4: Canadian Health System

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- Demonstrates knowledge of health and health systems in Canada and appropriately applies this information to work products and services, including:
    - Key characteristics (e.g. governance, funding, structures, related organizations, emerging trends, etc.)
    - Determinants of health (e.g. environment, genetics, socioeconomic), and
    - Key factors affecting healthcare (e.g., demographics, new technologies, incentives)
    - 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.)
    - Understanding the cultural and community context of care access and delivery
  - Demonstrates knowledge of the way HI benefits are realized and measured in the Canadian healthcare system.
  - 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).
  - 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).
  - Understands emerging needs and approaches to including the privacy of personal health information while improving care delivery and managing health systems (e.g. OCAP).
  - Addresses the challenges related to the adoption and realization of clinical value of information systems in the health sector.
  - Applies knowledge of the roles and relationships of health professionals, along with the organizational and regulatory structure in which they work.
  - Promotes the safe and appropriate use of health information technologies to ensure patient safety.
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## C5: Healthcare Transformation

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- Applies the basic theories, concepts and practices of management including:
    - Organizational behaviour and culture
    - Human resources
    - Financial and budget management
    - Governance, accountability, risk analysis and management
    - Procurement and vendor relationships, and
    - Customer relationships
  - Applies best practices in quality improvement and process improvement and process engineering to facilitate business and clinical transformation.
  - Applies best practices of change management in the implementation of new processes or systems.
  - Fosters the adoption and use of health information systems in clinical settings.
  - Facilitates self, individual, team and organizational learning and development through the use of appropriate technologies, communication channels and organizational skills.
  - 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.
  - Contributes to organizational plans and strategies to ensure that information and systems enable business goals and strategy.
  - Promotes and nurtures an information culture by facilitating appropriate uses of information and knowledge.
  - Communicates using audience-appropriate materials and language to present information and convey concepts to relevant stakeholders.
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## C6: Project Management

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- Applies current project management principles and best practices (e.g. project charter, scope, lifecycle, budgets, resourcing, timelines, milestones, monitoring, status reports).
  - Anticipates issues and opportunities and mitigates risks associated with projects.
  - Works collaboratively and contributes to project planning, implementation, monitoring and evaluation.
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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](https://digitalhealthcanada.com).



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