Infection Prevention and Control Core Competencies for Health Care Workers: A Consensus Document

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Background

The purpose of the original project was to develop a Canada-wide consensus on a set of common core competencies in Infection Prevention and Control that apply to all healthcare workers. CHICA-Canada Chapters were asked to develop a set of competencies they felt were essential information that a healthcare worker[1] involved in patient[2] care needed to allow them to work safely and to prevent transmission of organisms in their institution. The compiled list of competencies was made available for input by individual and groups of infection control professionals. Competencies identified by 80% of responses were included. A list of competencies was submitted from 37% of the Chapters. The competencies were compiled and categorized into: basic microbiology, hand hygiene, routine practices and transmission-based precautions, personal protective equipment, personal safety, sterilization and disinfection and critical assessment skills. Consensus (100%) was reached for 86% categories. Critical assessment skills category was the only category not listed by all participating Chapters. Input was received from 78 individuals and groups. There was a high degree of consensus among Canadian Infection Control Professionals. Published as: Henderson, EA, The CHICA-Canada Education Committee and members from CHICA Canada Chapters (2006). Essential Infection Control Competencies Needed by Healthcare Workers Involved in Patient Care: A Canadian Consensus. *Canadian Journal of Infection Control* 21(1): 62-7.

Purpose

The purpose of this initiative was to update the Canada-wide consensus on a set of common core competencies in Infection Prevention and Control that apply to all healthcare workers across all healthcare sectors. The scope of Infection Prevention and Control and IPAC Canada has expanded to include community, pre-hospital and public health including both regulated and non-regulated health care. The competencies were reviewed to reflect this change in scope as well as to reflect practice changes that have occurred in the last 10 years. The basic core competencies serve as a platform for adding occupation specific competencies. The objective was to identify the specific competencies healthcare workers need to be able to do to protect themselves in their working environment as well as protecting their patients/ residents/clients. There was no attempt to identify who is responsible for ensuring healthcare workers meet these competencies. Some competencies fall directly within the purview of Infection Prevention and Control while others are outside. Once a consensus is reached, these competencies will be used to develop training

[1] Healthcare workers include any individual who provides direct care for, or has direct contact with, a patient/resident/client or care environment including nurses, physicians, pharmacists, porters, service aides, housekeepers, etc. who work across all healthcare settings.

[2] Patients are all persons who receive or have requested health care or services. The terms “client” or “resident” is also used, subject to the health care setting.

for existing healthcare workers and will be distributed to institutions across Canada for integration into training programs for all future healthcare workers.

Methods

The core competencies were reviewed and updated through the following six phases of the project. This ensured that IPAC Canada members had the opportunity to provide input into the competencies.

Table 1: Process Steps by Project Phase

Phase of Project	Steps in the Process	Who	Completion Date
Phase 1 Internal Phase (work internal to the Task Force)	• Reviewed the 12 competencies for healthcare workers (HCWs) listed in the table and determined if the core competency category was still relevant.	All TF Members	Completed
	• Determined if each detailed competency was still relevant or should be removed or replaced.	All TF Members	Completed
	• Determined if there were any detailed core competencies that should be added.	All TF Members	Completed
	• Consensus on core competency categories and detailed core competencies.	All TF Members	Completed
	• Re-considered core competencies relative to Ebola and other new diseases.	All TF Members	Completed - June 25, 2015
Phase 2 Initial Review by IPAC-Canada Board	• Reviewed general content of the core competency categories and the detailed competencies.	IPAC-Canada Board	Completed - June 12, 2015
Phase 3 External Phase (IPAC Canada Chapters Members)	• Reviewed the compiled set of core competencies categories and detailed core competencies.	IPAC Chapter Members	Completed – December 2015
	• Reviewed detailed competencies and determine which competency belongs to which category.	IPAC Chapter Members	

Phase of Project	Steps in the Process	Who	Completion Date
	• Determined if any detailed competency was relevant or should be removed or replaced.	IPAC Chapter Members	
	• Determined if there were any detailed core competencies that should be added.	IPAC Chapter Members	
	• Consensus on core competency categories and detailed core competencies.	IPAC Chapter Members	
	• Submitted consensus document to Task Force.	IPAC Chapter President/Education Coordinator	
Phase 4 Internal Phase	• Compiled the listed core competencies from IPAC Chapters and members survey.	Task Force Members	Completed - July 28, 2016
	• Consensus on core competency categories and detailed core competencies.	Task Force Members	Completed - August 31, 2016
Phase 5 Review by IPAC Board	• Reviewed final core competencies.	IPAC Board	Board Meeting – September 12, 2016
Phase 6 Final Internal Phase	• Finalized the core competencies.	Task Force Members	Final – November 2, 2016

Table 2: Core Competency Categories Review 2016

Core Competency Category	Detailed Core Competency
Understands Basic Microbiology	✓ Recognizes that microorganisms can be bacteria, viruses, etc. ✓ Understands Antibiotic Resistant Organisms (AROs) (MRSA, VRE, Carbapenem Resistant Organisms (CRO)) and *Clostridium difficile* infection (CDI), including local isolation or patient management protocols, etc. ✓ Understands the concepts of normal flora versus pathogenic microorganisms.
Understands the 'Chain of Infection'	✓ Understands the three components required for infection transmission (presence of an organism, route of transmission of the organism from one person to another, a host who is susceptible to infection). ✓ Recognizes the routes of transmission of infectious organisms (how they move from one person to another) i.e., Contact, Droplet, Airborne routes. ✓ Recognizes characteristics of a susceptible host. ✓ Demonstrates the ability to apply knowledge about one disease to another similar disease, e.g., Ebola and other hemorrhagic diseases; influenza and other upper respiratory tract infections such as parainfluenza.
Understands the Importance of Surveillance	✓ Understands the ARO, CDI and other relevant infection rates for their unit(s)/area(s). ✓ Understands epidemiologic principles of infectious diseases and distributions relative to person, place and time. ✓ Understands the importance of travel history and related travel restrictions, i.e., knowing what and where infectious diseases are circulating, e.g., Ebola, measles, chickenpox.
Understands and Demonstrates the use of 'Point of Care' Risk Assessment	✓ Understands the principles of 'point of care' risk assessment. ✓ Applies 'point of care' risk assessment to every patient contact. ✓ Assesses the need for various Routine Practices based on a 'point of care' risk assessment.

Core Competency Category	Detailed Core Competency
Understands and uses Routine Practices	✓ Applies Routine Practices as the minimum practice standards for all patients in all settings all the time. ✓ Understands that Routine Practices are the key to preventing transmission of organisms among healthcare workers, physicians, patients and visitors. ✓ Understands that Source Control, achieved through administrative and engineering measures, is an effective way to prevent the transmission of infectious agents in all healthcare settings. Source Control includes but is not limited to: o Respiratory Etiquette and its importance; o Patient management including bed management, isolation, etc.; and o Visitor management. ✓ Champions Infection Prevention and Control principles to other healthcare workers, physicians, patients and visitors.
Understands the Importance of Hand Hygiene and Demonstrates Acceptable Methods	✓ Recognizes that hand hygiene is the best method of preventing transmission of infectious organisms. ✓ Understands the importance of alcohol based hand rub (ABHR) at the 'point of care'. ✓ Understands the 4 (5) moments for hand hygiene. ✓ Understands and demonstrates acceptable levels of hand hygiene with ABHR as the primary method and hand washing when hands are visibly soiled. ✓ Demonstrates when it is necessary to perform hand hygiene. ✓ Knows the hand hygiene compliance rate(s) for their unit(s) or area(s). ✓ Understands the importance of maintaining 'healthy hands'.

Core Competency Category	Detailed Core Competency
Understands and Demonstrates use of Appropriate Personal Protective Equipment (PPE)	✓ Lists the appropriate and required PPE items for specific activities, clinical presentations and known diagnoses. ✓ Demonstrates how to safely put on and take off PPE. ✓ Consistently uses PPE appropriately. ✓ Is 'fit tested' and performs a 'seal check' consistently each time a respirator is used.
Understands and Demonstrates the use of Additional Precautions: Why and When they are used	✓ Understands that Additional Precautions, in addition to Routine Practices, are used for clinical presentations or known diagnoses. Additional precautions: precautions when PPE use is specific to the emerging microorganism as directed by your health authority. ✓ Understands that in the situation where a novel microorganism is involved that there may be the need for enhanced precautions. ✓ Understands that the route of transmission of the organism determines which type of precaution category is needed (i.e., Contact, Droplet and/or Airborne). ✓ Understands and can demonstrate the elements/components for each type of precaution category (i.e., Contact, Droplet and/or Airborne).
Understands how to appropriately prevent and manage occupational exposures to sharps and blood and body fluids (Workplace Health and Safety)	✓ Safely manages blood and body fluids. ✓ Safely manages sharps. ✓ Recognizes that prompt assessment is required for any occupational exposure to sharps and blood or body fluids. ✓ Understands how to safely manage an occupational exposure to sharps, including the first aid necessary for puncture exposures. ✓ Understands how to safely manage an occupational exposure to blood and body fluids, including the necessary first aid for fluid exposures.

Core Competency Category	Detailed Core Competency
Understands the difference between general, biomedical, pharmaceutical or biohazardous wastes.	✓ Understands how to safely dispose of blood and body fluids. ✓ Understands where to dispose of various types of waste items including blood and body fluids based on municipal/regional regulations. ✓ Able to identify and dispose of selected items as general, biomedical or biohazardous wastes. ✓ Understands which containers are used for general, biomedical or biohazardous wastes.
Understands the cleaning, reprocessing and storage requirements for health care equipment	✓ Understands the differences between critical, semi-critical and non-critical health care equipment. ✓ Understands that non-critical health care equipment which touches intact skin requires appropriate cleaning, disinfection and storage between uses. ✓ Understands the difference between 'single-use', 'single-patient use' and 'reusable' medical devices. ✓ Understands that semi-critical health care equipment that comes into contact with non-intact skin or intact mucous membranes requires cleaning to remove organic material, followed by appropriate high-level disinfection and storage between uses. ✓ Understands that critical health care equipment that is introduced directly into the bloodstream or other normally sterile body sites must be thoroughly cleaned to remove organic material, then appropriately sterilized and stored between uses. ✓ Recognizes that not all cleaning products or disinfectants are the same. ✓ Demonstrates the appropriate cleaning, reprocessing and storage techniques as per manufacturers' instructions, including drying times. ✓ Understands that device reprocessing must be done in an appropriate and designated area. ✓ Recognizes high-touch contact areas within a patient/resident/client environment.

Core Competency Category	Detailed Core Competency
Understands the role of vaccine in preventing certain infections including annual influenza immunizations	✓ Understands that vaccines can prevent infection in susceptible persons. ✓ Recognizes why annual influenza immunization is recommended and important. ✓ Understands that they should be immune to vaccine-preventable diseases such as measles and mumps as per local recommendations. ✓ Recognizes that a staff member with an infectious condition can pose a risk to other health care workers, patients and visitors.
Critical Thinking	✓ Is aware of Infection Prevention and Control (IPAC) resources, including access to the local/area IPAC manuals or websites. ✓ Understands how and when to contact the Infection Control Professional for their facility or area. ✓ Recognizes the significance of unusual clusters of infectious illnesses and takes appropriate action. ✓ Is aware of disease protocols and alerts and implements them appropriately as directed by Infection Prevention and Control (e.g., gastroenteritis, severe respiratory illnesses). ✓ Demonstrates problem solving and critical thinking skills when presented with situations involving infectious agents. ✓ Demonstrates work practices that reduce risk of transmitting infection (e.g., immunization, staying home when ill, consistent application of Routine Practices and acceptable levels of hand hygiene compliance). ✓ Is aware that construction and renovation in patient care areas poses an infectious risk to the patients and staff and notifies the Infection Prevention and Control Professional appropriately.