

APIC/CHICA-Canada infection prevention, control, and epidemiology: Professional and practice standards

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Standards are authoritative statements that reflect the expectations, values, and priorities of the profession. While voluntary, these standards provide direction and a dynamic framework for the evaluation of practice to address the needs of the customers served. Standards also define the profession's accountability in terms of desired outcomes for which infection prevention and control professionals (ICPs) are responsible. These standards are designed to be used in identifying areas for professional growth, developing job descriptions, and providing criteria for performance evaluations.

These standards encompass a broad spectrum of practice settings and professional backgrounds and include key indicators that are designed to be used in evaluating both the competency of the individual and their practice. The key indicators represent multiple

skills considered necessary to meet the demands of the evolving health care environment. It is expected that the ICP will meet or exceed the indicators associated with both the Professional and Practice Standards.

In general, the standards will remain stable over time as they reflect each organization's philosophy and values; however, the indicators will be reviewed periodically to ensure that they incorporate and address current scientific knowledge, clinical practice, global issues, and technology.

I. PROFESSIONAL STANDARDS

Professional Standards describe a level of individual competence in the professional role. ICPs strive to maintain integrity and a high degree of competency through education, training, and certification. Professionals are expected to incorporate these standards appropriate to their role and practice setting. Key indicators for each standard are designed for use in professional performance evaluation.

1. Qualifications

Meets recommended qualifications to practice in the profession.

Indicators

- Experienced health care professional with a health sciences background;
- becomes certified in infection prevention and control when eligible through the Certification Board of Infection Control and Epidemiology; and
- maintains certification.

2. Professional development

Acquires and maintains current knowledge and skills in the area of infection prevention, control, and epidemiology.

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The Association for Professionals in Infection Control and Epidemiology, Inc (APIC), and the Community and Hospital Infection Control Association-Canada (CHICA-Canada) collaborated to craft this document: Infection prevention, control, and epidemiology: Professional and practice standards. Both professional organizations affirm their responsibility to their memberships and the public they serve to provide professional and practice standards. This document replaces the 1999 edition.

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Indicators

- Completes a basic infection prevention and control training course within the first 6 months of entering the profession;
- demonstrates basic knowledge and advances his/her education, knowledge, and skills as they relate to infection prevention and control in the following areas:
 - Epidemiology, including outbreak management;
 - infectious diseases;
 - microbiology;
 - patient care practices;
 - asepsis;
 - disinfection/sterilization;
 - occupational health;
 - facility planning/construction;
 - emergency preparedness;
 - learning/education principles;
 - communication;
 - product evaluation;
 - information technology;
 - program administration;
 - legislative issues/policy making; and
 - research.
- incorporates and disseminates research findings into practice, education, and/or consultation;
- collaborates with other professional organizations and academic entities to further the prevention of infection;
- participates in professional organizations and networking opportunities; and
- maintains current knowledge and functions well with electronic media, eg, computers and handheld devices, with which to communicate in the IPC environment.

3. Ethics

Makes decisions and performs activities in an ethical manner.

Indicators

- Complies with laws and regulations;
- holds paramount the confidentiality, safety, health, and welfare of all persons in the performance of professional duties;
- practices in a nonjudgmental, nondiscriminatory manner with sensitivity to diversity;
- acts in such a manner as to uphold and enhance personal and professional honor, integrity, and dignity;
- engages in infection prevention and control research in a professional manner;
- collaborates with and supports others to improve competency in the science of infection prevention, control, and epidemiology;

- ensures transparency and disclosure in performing research or applying for grants;
- builds professional reputation on personal merit;
- refrains from competing unfairly with others; and
- refuses gratuities, gifts, or favors that might impair or appear to impair professional judgment, or offer any favor, service, or thing of value to obtain special advantage.

4. Professional accountability

Responsible for the development, evaluation, and improvement of his/her own practice in relation to the Practice Standards.

Indicators

- Establishes and works toward professional goals and objectives;
- performs regular self-evaluations to identify strengths and areas for improvement;
- seeks constructive feedback regarding professional practice;
- keeps current on best practices through evidence-based research, consensus, and guidelines;
- participates in professional organizations; and
- acknowledges the commitment to protect clients through the support of safe practices and policies.

5. Leadership

Serves as a leader, mentor, and role model.

Indicators

- Provides direction and works collaboratively with others;
- shares knowledge and expertise;
- mentors less experienced health care providers/ancillary personnel;
- recognizes and supports the importance of research in shaping the practice of infection prevention, control, and epidemiology;
- brings creativity and innovation to practice;
- seeks opportunities to influence and educate policy-making bodies and the public; and
- collaborates and/or educates self with regard to the global infection prevention and control community.

II. PRACTICE STANDARDS

ICPs strive to incorporate relevant components of these standards in their own practice. Key indicators for each standard are designed to be used in personal

and program development, evaluation, and enhancement.

1. Infection prevention and control practice

Incorporates into practice effective activities that are specific to the practice setting, the population served, and the continuum of care.

Indicators

- Integrates surveillance findings into formal plans for improvement of practice and patient outcomes in various health care settings;
- reviews; analyzes; and implements regulations, standards, and/or guidelines of applicable governmental agencies and professional organizations;
- integrates relevant local, national, and global public health issues into practice;
- analyzes and applies pertinent information from current scientific literature and publications;
- develops and implements policies and procedures based on currently accepted infection prevention and control best practices;
- ensures that findings, recommendations, and policies of the program are disseminated to appropriate groups or individuals; and
- provides knowledge on the function, role, and value of the program to customers.

2. Surveillance

Uses a systematic approach to monitor the effectiveness of prevention and control strategies that are consistent with the organization's goals and objectives.

Indicators

- Develops a surveillance plan based on the population(s) served, services provided, and previous surveillance data;
- selects indicators and designs surveillance based on the projected use of the data;
- integrates pertinent regulatory requirements;
- uses standardized definitions for the identification and classification of events, indicators, or outcomes;
- utilizes information technology and systems applications;
- reports epidemiologically significant findings to appropriate customers;
- ensures requirements for communicable disease reporting are met; and
- periodically evaluates the effectiveness of the surveillance plan and modifies as necessary.

3. Epidemiology

Applies epidemiologic principles and statistical methods, including risk stratification and benchmarking, to identify target populations, determine risk factors, design prevention and control strategies, analyze trends, and evaluate processes.

Indicators

- Uses epidemiologic principles to conduct surveillance and investigations;
- employs statistical techniques to describe the data, calculate risk-adjusted rates, and benchmark;
- incorporates information technology and systems applications in the analysis and dissemination of data; and
- critically evaluates significance of findings and makes recommendations for improvement based on those findings.

4. Education

Serves as an educator and educational resource for health care providers, ancillary staff, patients, families, and the general public.

Indicators

- Assesses the needs of customers and develops educational objectives and strategies to meet those needs;
- utilizes learning principles appropriate to the target audience;
- utilizes appropriate information technology in educational design and delivery;
- collaborates in the development and delivery of educational programs and/or tools that relate to infection prevention, control, and epidemiology; and
- evaluates the effectiveness of educational programs and learner outcomes.

5. Consultation

Provides expert knowledge and guidance in infection prevention, control, and epidemiology.

Indicators

- Stays current with developments in infection prevention, control, and epidemiology;
- integrates into practice, policies, and procedures:
 - Pertinent regulatory requirements;
 - accreditation standards; and
 - guidelines.
- supports patients/families, administration, committees, health care providers, and ancillary staff in

infection prevention, control, and epidemiology issues;

- provides input into patient safety and health care quality initiatives; and
- collaborates with community health organizations.

6. Occupational health

Collaborates with occupational health in the development of strategies that address the risk of disease transmission to health care providers and ancillary staff.

Indicators

- Participates in development/review of occupational health policies and procedures related to infection prevention and control;
- assists in the development of an immunization program; and
- consults on postexposure protocols and activities related to communicable diseases.

7. Program administration and evaluation

Systematically evaluates the effectiveness of the program appropriate to the practice setting.

Indicators

- Develops and reviews the effectiveness of the program goals and objectives;
- assures that customer needs/expectations are considered in the development and continuous improvement of processes, products, and services;
- determines resource needs to accomplish the proposed goals and objectives; and
- communicates resource needs to administration based on goals and objectives.

8. Fiscal responsibility

Practices in a fiscally responsible and accountable manner.

Indicators

- Considers financial implications, safety, and clinical outcomes when:
 - Making recommendations;
 - evaluating technology and products; and
 - developing policies and procedures.
- incorporates fiscal assessments into program evaluation and/or reports, as applicable; and
- develops and maintains a departmental budget, as appropriate.

9. Performance improvement

Functions as an integral part of performance improvement initiatives to promote positive patient and employee outcomes.

Indicators

- Identifies opportunities for improvement based on observations, process and outcome indicators, and other findings;
- acts as an agent of change and participates in the change process;
- directs the organization's infection prevention and control improvement activities;
- participates in the organization's multidisciplinary improvement strategies;
- utilizes established measurement tools and techniques, eg, outbreak investigation, root cause analysis, brainstorming, and others; and
- contributes epidemiologic skills to improvement processes.

10. Research

Conducts; participates; evaluates; and/or applies relevant research findings to infection prevention, control, and epidemiology practice. Research includes informal epidemiologic studies, eg, outbreak/cluster investigations, surveillance findings, and others.

Indicators

- Critically evaluates published research and incorporates appropriate findings;
- disseminates relevant research findings through practice, education, and/or consultation;
- participates in infection prevention and control-related research independently or collaboratively;
- organizes and shares findings from surveillance activities and/or outbreak investigations;
- publishes or presents research findings to assist in advancing the field of infection prevention, control, and epidemiology; and
- incorporates cost analysis into infection prevention and control research when possible.

Resources

- Scheckler WE, Brimhall D, Buck AS, Farr BM, Friedman C, Garibaldi RA, et al. Requirements for infrastructure and essential activities of infection control and epidemiology in hospitals: a Consensus Panel Report. *Am J Infect Control* 1998;26:47-60.
- Friedman C, Barnette M, Buck AS, Ham R, Harris JA, Hoffman P, et al. Requirements for infrastructure and essential activities of infection

- control and epidemiology in out-of-hospital settings: a Consensus Panel report. *Am J Infect Control* 1999;27:418-30.
- The role of the infection control practitioner—CHICA-Canada. *Can J Infect Control* 1996;11:36-7.
- Horan-Murphy E, Barnard B, Chenoweth C, Friedman C, Hazuka B, Russell B, et al. APIC/CHICA-Canada Infection Control and Epidemiology: Professional and Practice Standards. Association for Professionals in Infection Control and Epidemiology, Inc., and the Community and Hospital Infection Control Association-Canada. *Am J Infect Control* 1999;27:47-51.
- Applied Management Professionals for Certification Board of Infection Control. A national job analysis of the infection control professional. Final report. Washington (DC): Applied Management Professionals for Certification Board of Infection Control; 2006.
- APIC Code of Ethics. *Am J Infect Control* 1999;27:51.
- College of Nurses of Ontario Professional Standards. Available at: <http://www.cno.org/prac/profstandards.html>. Accessed June 2, 2007.
- National Association for Healthcare Quality Standards of Practice for Healthcare Quality Professionals. Available at: <http://www.nahq.org/about/code.htm>. Accessed June 2, 2007.
- Standards of Practice in Oncology Social Work, 2001. Available at: <http://www.aosw.org/html/prof-standards.php>. Accessed June 2, 2007.
- Lee TB, Montgomery OG, Marx J, Olmsted RN, Scheckler WE. Recommended practices for surveillance: Association for Professionals in Infection Control and Epidemiology (APIC), Inc. *Am J Infect Control* 2007;35:427-40.