2026 APIC Competency Model
Domain and Subdomain Definitions

Domain 1: IPC Practice and Operations

The domain encompasses the applied knowledge and foundational areas that infection preventionists (IPs) use across practice settings. These areas include program design and management; epidemiology of infectious diseases and surveillance; microbiology and laboratory methods; environmental infection prevention and control (IPC); occupational IPC; education; emergency management; and cleaning disinfection, and sterilization. Mastery of the IPC Practice and Operations domain allows IPs to effectively mitigate the transmission risk of epidemiologically significant pathogens.

IPC Practice and Operations Subdomains

1. Program Management

This subdomain focuses on the design, implementation, and evaluation of the IPC program to prevent infection transmission. In program management, IPs apply the following strategies: proactive risk assessment and mitigation; compliance with regulatory requirements and accreditation standards, public health, and professional society standards; development of policies and procedures; timely identification and investigation of infections; and assessment of the IPC program's needs and effectiveness.

2. Epidemiology of Infectious Diseases and Surveillance

This subdomain addresses the development and implementation of setting-specific surveillance plans and appropriate surveillance methodology. In this subdomain, IPs apply core IPC principles, participate in rounding and outbreak investigations, use epidemiological methods, apply relevant infection surveillance definitions, and promote compliance with both internal and external health reporting requirements.

3. Microbiology and Laboratory Methods

This subdomain covers the applied knowledge of disease-causing microorganisms in humans and animals as well as the laboratory techniques used to identify them. Through collaboration and interdisciplinary partnerships, IPs promote the appropriate use of diagnostic testing and support antimicrobial stewardship to optimize antimicrobial use while minimizing associated harm, and antimicrobial resistance.

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4. Environmental IPC

This subdomain encompasses the development and implementation of measures that mitigate infection risks from environmental contamination, especially in key risk areas such as construction and renovation; building infrastructure and facility management; the handling of air, water, waste, and linens; pharmacy operations; and food safety. In environmental IPC, IPs use data-driven processes to ensure a safe, functional, and sanitary environment, and collaborate with interdisciplinary teams to support routine assessment of environmental risks through rounding and observation.

5. Occupational Health IPC

This subdomain addresses the development, implementation, and evaluation of IPC strategies related to occupational health. Such strategies include infectious disease screening, vaccinations, and mitigation plans for communicable disease exposures. With regard to occupational IPC, IPs participate in and lead interdisciplinary partnerships, particularly with occupational health professionals, to minimize the risks of infection transmission among personnel and between personnel and individuals in their care. In these partnerships, IPs help develop, apply, and evaluate protocols, policies, and procedures to guide proper exposure assessment and management.

6. Education

This subdomain pertains to the design and implementation of IPC-related education and training. As educators, IPs apply knowledge related to adult learning principles and best practices, as well as needs assessment and teaching methodologies, and collaborate with subject-matter-experts in the design of competency-based training. Additionally, IPs tailor educational objectives and strategies to effectively address the specific knowledge, skill, and/or practice gaps of the target audience.

7. Emergency Management

This subdomain covers the development, implementation, and evaluation of systematic plans to guide the preparation, response, mitigation, and recovery efforts associated with emergencies. As members of a multidisciplinary emergency management team, IPs provide expertise to ensure that IPC measures are integrated into emergency response plans in accordance with an all-hazards approach that considers degradation of the environment and surge-capacity challenges. In collaboration with others, IPs develop and oversee site-specific IPC plans that incorporate response plans for emerging communicable diseases, utility system failures, effects from natural disasters, and/or release of biological agents, as well as other identified emergencies.

8. Cleaning, Disinfection, and Sterilization

This subdomain covers the application of knowledge of cleaning, disinfection, and sterilization (CDS) principles, including environmental disinfection, to mitigate infection risks. When addressing CDS issues, IPs are guided by knowledge of the Spaulding classification system, which provides a framework for determining the appropriate level of processing items in conjunction with manufacturers' instructions for use. IPs partner with interdisciplinary stakeholders to support the oversight of packaging, storage, and monitoring systems for reusable medical devices and instruments promoting safety and adherence to standards and regulatory requirements.

Domain 2: Technology

This domain encompasses the effective integration and leveraging of technology to enhance IPC and surveillance practices, optimize clinical outcomes, improve data usage, and foster collaboration across settings. Healthcare technology is inclusive of tools and systems designed to support healthcare delivery such as medical devices, information technology (IT) platforms, algorithms, artificial intelligence (AI), and cloud-based solutions.

Technology Subdomains

1. Foundational Digital Skills

This subdomain focuses on essential knowledge necessary for the assessment and application of basic digital technology such as computer and mobile device operation, internet navigation, software and application use, information management, online communication, and cybersecurity. Foundational digital skills encompass digital literacy, communication, and collaboration abilities. IPs with these skills have knowledge of and can use basic technology applications to store, retrieve, share, and apply healthcare information, data, and educational resources. Digital communication and collaboration involve the effective exchange of information and teamwork through electronic devices, software platforms, media tools, and communication technologies.

2. Health Information Systems and Interoperability

This subdomain addresses the use of digital infrastructure and integration strategies to capture, manage, and exchange healthcare data across providers and platforms. Like other clinicians, IPs use technologies such as electronic health records and electronic data warehouses, as well as the processes that enable seamless, secure, and accurate data sharing to support clinical decision-making, improve patient outcomes, and streamline healthcare operations. IPs are also expected to understand protected health information and privacy rules, as well as the utility of surveillance and screening tools within the electronic health record.

3. Data Reporting and Analytics

This subdomain focuses on the ability to effectively manage infection-related data by integrating diverse data streams, resolving inconsistencies, and ensuring accurate, relevant, and timely reporting in a resource-efficient manner. Data management includes validating, storing, protecting, and processing data to maintain accessibility and reliability for all stakeholders. By recognizing and addressing gaps in data interpretation, IPs can also help transform raw data into actionable insights through tailored visualization techniques that enable the identification of patterns, trends, and correlations critical to IPC efforts while enhancing communication with end users.

4. Clinical and Emerging Technologies

This subdomain encompasses meaningful and productive engagement with tools, systems, and innovations that are either currently used in healthcare settings (clinical technologies) or are newly developed and beginning to shape the future of medicine and care delivery (emerging technologies such as artificial intelligence [AI]). The aims of such technologies are to improve the efficiency of diagnosis, treatment, and rehabilitation; increase the cost-effectiveness of the health system; reduce risk exposure; and eliminate errors. This subdomain extends to understanding, evaluating, selecting, and applying clinical and emerging technologies, including AI. It also covers business intelligence, automation, software development and industry advancements.

Domain 3: Research

This domain supports the development of research literacy, the application of evidence to practice, and meaningful research contributions to the IPC community. Key elements of research include study design, survey and assessment development, research collaboration, statistical methodologies, evaluation of published studies, funding, and the ethical and responsible conduct of research.

Research Subdomains

1. Research Literacy and Critical Appraisal

This subdomain covers the ability to locate, interpret, evaluate, and synthesize research literature to inform the practice of IPs and support evidence-based decision-making. Competencies for this subdomain include understanding the hierarchy of research studies, recognizing bias and conflict of interest, and the application of principles of correlation, causation, and causal inference when appraising research.

2. Study Design and Methodology

This subdomain addresses the ability to identify knowledge gaps and formulate meaningful research or improvement questions. As researchers, IPs apply quantitative, qualitative, and mixed-methods research designs to proposed research questions. Additionally, IPs who are meaningfully engaged in research recognize the hierarchy of evidence when designing studies, account for bias and confounding, and incorporate considerations of sampling, validity, reliability, and statistical power when selecting study designs.

3. Research Instruments and Data Analysis

This subdomain covers the skills to select, develop, and apply appropriate research instruments (e.g., surveys, inferential statistics, assessments, interviews, observations, data collection tools), and to use basic data analysis (e.g., descriptive statistics and thematic analyses) and statistical methods to generate valid and reliable findings.

4. Ethics and Responsible Conduct of Research

This subdomain emphasizes adherence to principles of research ethics, including human subject protections, Institutional Review Board (IRB) compliance, data integrity, and responsible authorship practices. IPs are also responsible for understanding the differences between performing quality improvement projects and research.

5. Research Dissemination

This subdomain focuses on the ability to effectively share and communicate research findings with diverse audiences. Research findings include peer-reviewed publications and presentations. Mechanisms to further communicate and promote the application of research across audiences include knowledge mobilization resources such as infographics, policy briefs, and toolkits.

6. Research Implementation

This subdomain addresses the use of implementation science principles to translate research findings into practice and policy. IPs can use research to support the evaluation, integration, adaptation, and sustainment of evidence-based practices to improve outcomes and inform decision-making.

Domain 4: Quality and Safety

This domain encompasses the use of the principles of performance improvement, behavioral science, human factors engineering, and quality data frameworks to design reliable processes, reduce variability, and sustain improvements in quality and safety. These efforts require accountability, continuous monitoring, and interdisciplinary collaboration to ensure care that is safe and effective.

Quality and Safety Subdomains

1. Safety and Quality Improvement

This subdomain covers the identification of opportunities for IPC improvements through the analysis of quality metrics, adverse event reporting, and process measures. IPs use quality improvement tools and methodologies to assess performance, identify gaps, and prioritize improvement efforts. To effectively advance quality and safety improvement, IPs require understanding of the systems in which IPC practices occur, the safety culture of the organization, and high-reliability concepts to support sustainable interventions.

2. Performance Improvement

This subdomain includes the use of systematic, data-driven approaches to analyze processes and outcomes, identify gaps, and implement and sustain evidence-based changes that enhance quality, safety, efficiency, and effectiveness. In collaboration with other disciplines, IPs can participate and lead performance improvement initiatives to integrate process and outcomes data to reduce infection risk and improve patient outcomes.

3. Behavioral Science

This subdomain focuses on the ability to recognize and apply behavioral science principles to support the adoption and sustainment of evidence-based IPC practices. Application of behavior science helps IPs identify behavioral and socio-adaptive factors that influence the implementation of IPC practices, address barriers to practice change, and tailor interventions to improve health outcomes.

4. Human Factors Engineering

This subdomain involves understanding and applying human factors engineering methods to optimize human interactions within systems. Physical and organizational environments, tools and technologies used, tasks performed, workflow, and other systemic factors influence human behaviors in ways that could increase or decrease infection risk. IPs participate in the analysis of such factors and the application of that analysis to design effective and sustainable IPC interventions.

5. Quality Data Framework

This subdomain covers the application of the quality data framework, a structured approach for data collection, quality, integrity, and visualization. Knowledge of the quality data framework can inform the selection of metrics that are appropriate for a particular audience, guide data-driven decision making, improve regulatory adherence, and increase system efficiencies. IPs can collaborate with others responsible for data governance and analytics to ensure optimal data capture and accuracy.

Domain 5: Leadership

This domain covers leadership in IPC, which includes guiding, influencing, coaching, and motivating others toward a shared vision for safety and health. Competency in this domain is demonstrated through ethical, reliable, and data-informed decision-making, particularly in high-pressure situations. IPs lead by setting direction, building trust, forming relationships, and empowering others, regardless of formal title, role, or setting to support sustainable IPC efforts that align with broader organizational or community goals.

Leadership Subdomains

1. Interdisciplinary Partnerships

This subdomain focuses on the building of collaborative relationships across disciplines, roles, and communities to support IPC efforts. Through these partnerships, IPs inspire trust and effectively influence decision-making to align with current and evidence-based best practice. Additionally, they engage stakeholders at all levels, and foster shared ownership of IPC goals, influencing a culture of safety that protects both individuals and communities. IPs also provide consultation and subject matter expertise to interdisciplinary partners to ensure that their work aligns with IPC best practices.

2. Organizational Strategy and Change Navigation

This subdomain emphasizes how IPs navigate the structure, workflows, and strategic priorities of the organization or system to develop and align IPC strategy with broader organizational goals. IPs identify opportunities, anticipate barriers, and adapt to changing needs within their organization. They also use effective change management strategies to implement changes aligned with strategic priorities; contribute to innovative solutions; and apply a global perspective, recognizing how international trends and diverse settings may impact local priorities. Additionally, IPs apply knowledge of rules, laws, and standards to ensure that plans and decisions meet regulatory and organizational requirements.

3. People Leadership and High-Performing Teams

This subdomain addresses opportunities to lead people and build high-performing formal and informal teams to achieve IPC goals. IPs set clear expectations, promote accountability, and facilitate collaboration across disciplines. They also adapt to shifting priorities and lead change efforts. IPs build capacity through coaching, training, mentorship, and creating inclusive environments where all team members can succeed, whether through formal management or project-based leadership. As leaders, IPs also facilitate career development and growth within formal IPC teams.

4. Accountability and Long-Term Impact

This subdomain emphasizes how IPs demonstrate ethical, data-informed decision-making and accept responsibility for actions and outcomes. To achieve these objectives, IPs maintain focus and composure under pressure and show resilience and adaptability in the face of challenges. They also balance immediate organizational needs with long-term goals by promoting sustainable and highly reliable practices, responsible resource stewardship, and a culture of continuous learning, equity, and safety.

5. Business Acumen and Resource Stewardship

This subdomain addresses financial, operational, and systemic forces that impact the healthcare system and IPC. IP leaders apply knowledge of healthcare economics, budgets, and resource allocation to steward people, technology, and fiscal resources responsibly. They also support alignment of financial decisions with strategic objectives and ensure that IPC is an organization-wide priority, including through the development of business cases for IPC initiatives and resource allocation.

Behavioral Competencies

Behavioral competencies include those observable skills, attitudes, and actions that demonstrate how individuals apply their knowledge and values in the workplace. Behaviors describe *how* work is performed and can be developed over time as part of one's personal and professional growth. Setting intentional behavior competencies for IPs fosters consistency across the various roles and practice settings and elevates the professional standards of excellence.

Ethical Practice

Demonstrates integrity and fairness by making decisions that align with professional standards, organizational values, and the greater good. Consistently acts with honesty and transparency, accepts responsibility for outcomes, and strives for equity in interactions and processes.

Analytical and Critical Reasoning

Applies data, evidence, and logical judgment to identify issues, to evaluate options, and to solve problems effectively. Thinks systematically, weighing both short-term and long-term implications, and uses sound reasoning to guide decision-making.

Purposeful Communication

Conveys information clearly, concisely, and with intent, adapting style and tone to meet the needs of different audiences. Builds trust and influence through active listening, respectful dialogue, conflict resolution, and strategic communication that facilitates shared understanding and purposeful action towards common goals.

Advocacy

Promotes fairness, inclusivity, and equitable access to care, resources, and opportunities. Recognizes and addresses systemic barriers that contribute to disparities, engaging others to build sustainable solutions that advance equity and improve outcomes. Advocates for IPC practices within the local care setting and across the broader healthcare environment. Champions public policy and community-level initiatives that strengthen health, safety, and well-being for the populations served.

Emotional Intelligence and Adaptability

Demonstrates self-awareness, empathy, and composure in diverse or difficult situations. Responds to challenges and change with resilience, adjusting behavior and approaches to remain effective, supportive, and respectful of others' perspectives.

Collaborative and Interprofessional Practice

Builds and sustains respectful partnerships across disciplines, roles, and perspectives to achieve shared goals. Actively contributes to teamwork by fostering trust, encouraging input, and seeking solutions that reflect collective expertise and priorities.