



2012 Examination Content Outline

The current infection control certification examination is based on a content outline developed from a practice analysis completed in 2010. The content outline is presented here in its entirety. The number of examination questions on the examination from each content area is provided by each major (1 - 6) content heading. In addition to the 135 items (questions) used to compute candidates' scores, all examination forms will include 15 unscored pretest items, interspersed throughout the examination. All items are also classified by the cognitive level that is expected of the candidates. Among the 135 scored items, approximately 25 percent require recall of information, 60 percent require application of knowledge, and 15 percent require analysis of a situation.

1. Identification of Infectious Disease Processes (18)

- A. Differentiate among colonization, infection, and contamination
- B. Identify occurrences, reservoirs, incubation periods, periods of communicability, modes of transmission, signs and symptoms, and susceptibility associated with the disease process
- C. Interpret results of diagnostic/laboratory reports
- D. Recognize limitations and advantages of types of tests used to diagnose infectious processes
- E. Recognize epidemiologically significant organisms for immediate review and investigation
- F. Differentiate among prophylactic, empiric, and therapeutic uses of antimicrobials
- G. Identify indications for environmental microbiologic monitoring

2. Surveillance and Epidemiologic Investigation (38)

- A. Design of Surveillance Systems
 - 1. Develop a surveillance plan based on the population served, services provided, and regulatory or other requirements
 - 2. Evaluate periodically the effectiveness of the surveillance plan and modify as necessary
 - 3. Identify appropriate critical/significant lab results and implement a notification system
 - 4. Determine data needed to calculate specific rates
 - 5. Integrate surveillance activities within health care settings (e.g., ambulatory, home health, long term care, acute care)

- 6. Establish mechanisms for identifying those with communicable diseases requiring follow-up and/or isolation

B. Collection and Compilation of Surveillance Data

- 1. Use standardized definitions for the identification of outcomes and processes
- 2. Use a systematic approach to record surveillance data
- 3. Determine numerators, denominators, and constants for calculations of rates for outcomes and processes
- 4. Organize and manage data in preparation for analysis
- 5. Determine the incidence or prevalence of infections
- 6. Calculate specific infection rates (e.g., providerspecific, unit-specific, device-specific, procedure-specific)
- 7. Calculate risk stratified rates
- 8. Incorporate post-discharge surveillance findings into calculation of rates

C. Interpretation of Surveillance Data

- 1. Generate, analyze, and validate surveillance data
- 2. Use basic statistical techniques to describe data (e.g., mean, standard deviation, rates, ratios, proportions)
- 3. Recognize statistical significance of surveillance data
- 4. Monitor and interpret antibiotic resistance patterns
- 5. Recognize the need for an epidemiologic study to investigate a problem (e.g., case control, cohort studies)
- 6. Compare surveillance results to published data or other benchmarks

7. Prepare and report findings of surveillance or epidemiologic investigation to customers, using analyzed data, tables, graphs, or charts, as appropriate

8. Develop and implement corrective action plans based on surveillance findings

D. Outbreak Investigation

1. Verify existence of outbreak

2. Collaborate with appropriate persons to establish the case definition, period of investigation, and case-finding methods

3. Define the problem using time, place, person, and risk factors

4. Formulate hypothesis on source and mode of transmission

5. Implement and evaluate control measures, including ongoing surveillance

6. Prepare and disseminate reports

3. Preventing/Controlling the Transmission of Infectious Agents (39)

A. Develop and review infection prevention and control policies and procedures

B. Collaborate with public health agencies in planning community responses to biological agents (e.g., anthrax, influenza)

C. Identify and implement infection prevention and control strategies related to:

1. Hand hygiene

2. Cleaning, disinfection, and sterilization

3. Specific direct and indirect care settings (e.g., patient care units, operating room, ambulatory care center, respiratory therapy)

4. Infection risks associated with therapeutic and diagnostic procedures and devices (e.g., dialysis, angiography, bronchoscopy, endoscopy, intravascular devices, urinary drainage catheter)

5. Recall of potentially contaminated equipment and supplies

6. Initiation and discontinuation of isolation/barrier precautions when indicated

7. Patient placement, transfer, and discharge

8. Environmental hazards

9. Use of patient care products and medical equipment

10. Immunization programs for patients

11. Construction and renovation in patient care settings

12. The influx of patients with communicable diseases (e.g., bioterrorism, emerging infectious diseases)

4. Employee/Occupational Health (10)

A. Review and/or develop screening and immunization programs

B. Provide counseling, follow up, work restriction recommendations related to communicable diseases or following exposures

C. Assist with analysis and trending of occupational exposure incidents and information exchange between Occupational Health and Infection Prevention and Control departments

D. Assess risk of occupational exposure to infectious diseases (e.g., TB, bloodborne pathogens)

5. Management and Communication (Leadership) (16)

A. Planning

1. Conduct an infection risk assessment of the organization

2. Develop, evaluate, and revise a mission and vision statement, goals, measurable objectives, and action plans for the Infection Prevention and Control Program

3. Recommend specific equipment, personnel, and resources for the Infection Prevention and Control Program

4. Participate in cost benefit assessments, efficacy studies, and product evaluations

5. Recommend changes in practice based on clinical outcomes and financial implications

B. Communication and Feedback

1. Provide infection prevention and control findings, recommendations, annual reports, and policies and procedures to appropriate individuals, committees, departments, and units

2. Communicate with internal and external customers (e.g., related to Infection Prevention and Control issues of continuity of care, reporting communicable diseases)

3. Collaborate with Risk Management/Quality Management in the identification and review of adverse and sentinel events

4. Evaluate accreditation/regulatory issues and facilitate compliance

C. Quality/Performance Improvement and Patient Safety

1. Participate in quality/performance improvement and patient safety activities related to infection prevention and control

2. Demonstrate quality/performance improvement projects through the use of graphic tools (e.g., “fishbone” diagram, Pareto charts, flow charts)

6. Education and Research (14)

A. Education

1. Assess needs, develop goals and measurable objectives, and prepare lesson plans for

educational offerings

2. Apply principles of adult learning to educational strategies and delivery of educational sessions

3. Prepare, present, or coordinate educational workshops, lectures, discussion, or one-on-one instruction on a variety of Infection Prevention and Control topics

4. Evaluate the effectiveness of education and learner outcomes (e.g., behavior modification, compliance rate)

5. Instruct patients, families, and other visitors about methods to prevent and control infections

B. Research

1. Apply critical reading skills to evaluate research findings

2. Incorporate research findings into practice through education and consultation