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## Brief Report

# Long-term care certification in infection prevention: The time is...now!

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### Key Words:

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The complexity and risks of long-term care (LTC) resident care has continued to increase, including infection risk, as regulatory agencies and the LTC industry seek credible and knowledgeable infection preventionists for their facilities. Developing an LTC infection prevention and control certification exam indicates infection preventionists can proficiently manage infection prevention and control programs.

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## BACKGROUND

Certification, the “voluntary process by which individuals are evaluated against predetermined standards for knowledge, skills, or competencies,”<sup>1</sup> is a hallmark achievement for infection preventionists (IPs) and represents the individual’s and their organization’s commitment toward patient and staff safety and continual improvement.<sup>2</sup> The certification process is designed to assure that there will be a selection of trained professionals who have met established standards of education and experience.<sup>3</sup> The federal government endorses certification to reduce costly health manpower training for services reimbursed under federal health insurance programs.<sup>4</sup>

Professional associations such as the Association for Professionals in Infection Control and Epidemiology (APIC) and Infection Prevention and Control Canada have noted a significant increase in the demand for infection prevention knowledge and application in long-term care (LTC).<sup>5,6</sup>

In 2018, with collaboration from the APIC Board of Directors, the Certification Board of Infection Control and Epidemiology, Inc (CBIC) began the process of developing a distinct certification pathway for LTC IPs using the same rigorous process as the Certification in

Infection Control (CIC) credential. The purpose of this paper is to describe the LTC certification examination developments.<sup>7</sup>

## METHODS

### Conducting the practice analysis

CBIC commissioned a practice analysis to establish the content validity and test specification for the examination using standardized criteria to obtain information about LTC IP tasks performed and the knowledge required to safely implement them. The practice analysis in July and August 2021 involved a multimethod approach that included meetings with 50 North American LTC subject matter experts (SMEs) with certification ranges from 2 to 40 years for item writing, review, and standardizing prior to distributing the practice analysis (<https://www.cbic.org/CBIC/PDFs/CBIC-LTC-Job-Analysis-Report-2021.pdf>).

The SMEs rated 106 tasks and 72 knowledge statements from 9 knowledge domains. The “long-term care settings” domain was added to the pre-existing 8 domains from the CIC examination. Using a 5-point Likert scale, survey participants also rated the relevance of each statement to their practice. The 9 domains were:

- (1) LTC settings
- (2) Management and communication of the infection prevention program
- (3) Identification of infectious diseases

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- (4) Surveillance and epidemiologic investigation
- (5) Prevention and control of infectious and communicable diseases
- (6) Environment of care
- (7) Cleaning, disinfection, and sterilization of medical devices and equipment
- (8) Antimicrobial stewardship
- (9) Employee/occupational health

Of the 2,346 LTC IPs who participated in the survey, 1,659 responses qualified for inclusion in the data analysis. Surveys with less than 55% completion rate were excluded from data analysis. The most common settings of respondents were independent living and skilled nursing facilities, and the majority reported that each task and knowledge domain was well covered.

#### *Develop test specifications*

The “Test Specification Committee” met in September 2021 to review the practice analysis results, create the content outline to guide the LTC examination development, and ensure that only validated task and knowledge statements were included. The analysis was performed by establishing a criterion (cut point) for inclusion. All 106 tasks and 72 knowledge areas achieved high importance ratings and were included in the test development. Each member of the “Test Specification Committee” assigned a percentage weight in each knowledge domain to guide the domain’s emphasis with the test content, and the committee determined the optimal percentage weights for each domain. The approved test content weight for each part was used to guide item writing and examination assembly.

#### *Item writing and review*

Item writing and review, the development of items (questions) performed by LTC SMEs, was conducted from May to June 2022. The “Item Review Committee” reviewed 438 test questions developed by the SMEs using a checklist to assess the quality of each test question; 348 questions were approved.

#### *Form review*

In July 2022, a form review meeting was held to verify the test items selected for the examinations adequately measured the competent performance of the LTC IP. Both the CIC and the Long-Term Care-Certification in Infection Prevention (LTC-CIP) exams consist of 150 multiple-choice questions; 135 test questions are scored, and 15 test questions are assessed for future testing considerations.

## RESULTS

#### *Conducting the beta test*

Beta (pilot) testing was completed in October 2022. Eligible applicants must meet all of the following requirements:

- (1) Completed postsecondary education in a health-related field including but not limited to medicine, nursing degree/nursing diploma, laboratory technology, public health, or biology. Postsecondary include public or private universities, colleges, community colleges, etc.
- (2) Responsibility for the infection prevention and control programs/activities in a LTC setting. Candidates will fill out an attestation form confirming this information.

A total of 286 LTC IPs from the United States, Canada, Egypt, Saudi Arabia, the United Emirates, and India completed the first exam.

#### *Item analysis*

During October 2022, the CBIC LTC SMEs used the National Commission for Certifying Agencies criteria to validate the items included in the exam.<sup>8</sup> Each was reviewed to assess whether to retain it as is, exclude or archive it for future reference, or revise it.

#### *Set the passing score*

In November 2022, the CBIC LTC SMEs met to establish a passing standard (ie, cut score). Results were analyzed and discussed, and each panel member was asked to estimate the percentage of first-time certification candidates who would be expected to pass the examination based on established criteria. For the final cut score consideration grouping, there is a continuum between examination candidates who truly do not have the necessary knowledge, skills, and abilities and are considered not qualified and those candidates who truly have these attributes and are qualified. Due to the testing process, it is arduous to have 2 strictly independent groups.

Throughout the process, more than 1,700 individuals with LTC expertise participated in the various job analysis phases, including task force/test specification and pilot testing. The LTC-CIP was officially launched in February 2023.

## CONCLUSIONS

#### *Summation/lessons learned*

In the midst of a protracted pandemic and multiple hurdles, APIC initiated the vision, and CBIC developed the LTC-CIP certification examination. The CIC examination is accredited by the National Commission for Certifying Agencies, a leading developer of certification standards, which signifies a valid, reliable, and secure certification process.<sup>9</sup> The LTC-CIP certification is aligned with the CBIC 2023 to 2025 vision statement, “a world free of infections through demonstrated professional competency.”<sup>10</sup> Global efforts continue to be underway to demonstrate the importance of certification to regulatory bodies, international public health agencies, and accrediting agencies.

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