The Changing Role of IPC as Documented by the CBIC Practice Analysis
Linda Laxton, RN, BSCN, CIC & Ruth Curchoe, RN, MSN, CIC
A Webber Training Teleclass

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Part I
The Practice Analysis Process

Linda B. Laxson, RN, BSN, CIC
CBIC President, 2006

Practice Analysis (PA) Process
This section defines a PA and describes the development process.

What is a PA?
The process of systematically collecting information that describes behaviors and activities performed by occupants of a specific job for the purpose of defining or validating the content of a certification examination.

Why do a PA?
- Required for a legally defensible certification program
- The goal of certification is to assess individual competency by objectively measuring knowledge mastery in a particular field.
- In order to do that you must first know what core practices to measure, i.e. what practices are common to the majority of ICPs regardless of the practice setting.

Why do a PA, cont.
- Once is not enough!
- A valid certification examination must reflect current practice.
- Would a CIC exam based on the PA done in 1981 reflect practice today?
- CBIC repeats the PA every 5 years

PA Process
- Survey Instrument
  - Develop a PA survey instrument
  - Pilot the instrument
  - Distribute to field ICPs
- Analysis of responses
  - Develop test specifications based on the analysis of data

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**Professional Testing Agency**
- To assure validity and reliability of the PA process, CBIC contracts with a professional testing agency to provide guidance and direction
- Applied Measurement Professionals (AMP) has served as CBIC’s testing agency for the last 6 PA
- Their expertise in testing is critical

**Oversight of the PA**
- 12 member Advisory Committee
  - Membership Includes
    - Members of CBIC Board
    - Members of CBIC Test Committee
    - Other certified individuals
    - Diverse educational background, work settings, & regional locations represented
    - Demonstrated expertise in IPC
    - MUST be certified in IPC
    - AMP psychometrician

**PA Advisory Committee Timeline**
- June 2005 meeting to develop the survey instrument.
- July 2005 the instrumented was piloted
- October 2005 the final survey was distributed to participants
- December 2005 return deadline
- December 05 January 06 AMP compiles the data analysis

**PA Advisory Committee Timeline, cont.**
- February 2006 meeting to review the data analysis and develop test specifications
- February 06 – January 07 CBIC develops new CIC examinations to reflect new content outline
- January 31, 2007 new content outline will be available on the CBIC website
- July 1, 2007 CIC examinations reflect the new content outline

**Survey Recipients**
- CBIC email database
- APIC membership email database
- CHICA-Canada membership email database
- Saudi Arabia ICP email database

**Demographic Information**
- Years of experience
- Type of facility
- Bed capacity
- Facility Accreditation
- Number of ICPs
- Hours/week spent in IPC activities
- Certification status
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Sources for Task List
- 2001 CBIC PA task list
- Job descriptions
- Performance Appraisals
- IPC Course syllabi

Major Classifications of Core Task
- Identification of Infectious Diseases Processes
- Surveillance & Epidemiologic Investigation
- Preventing/Controlling the Transmission of Infectious Agents
- Employee Health/Occupational Health
- Management and Communication
- Education
- Research

Survey Response Rating Scale
- In your role as an ICP, considering both importance and frequency, how significant is the task to safe and effective performance?
  - 0 = Not necessary for the job
  - 1 = Minimally significant
  - 2 = Somewhat significant
  - 3 = Quite significant
  - 4 = Extremely significant

2005/2006 PA Survey
- Electronic survey format used
- 9590 electronic invitations were sent
- 1304 bounce-backs for undeliverable addresses
- 1809 responses received
- 21.8% response rate

PA Survey Results
- Reviewed in detail by the PA Advisory Committee
- Statistical analysis identifies core task common to the practice of IPC
- Statistical analysis determines how each task group should be weighted on the examination
- End result = content outline for CIC Exam

Part II

2006 Practice Analysis Results
Ruth Curchoe, RN, MSN, CIC
CBIC Practice Analysis
Advisory Committee Chair

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Demographic Results

This section defines demographic variables of the ICP survey respondents.

ICP Years of Experience

Primary Employer

Bed Capacity

Facility ICPs

Facility Accreditation
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Hours/Week Worked

CIC Status

Demographic Summary
- 2 - 6 years experience
- community based acute care facility
- 101 or more beds
- accredited
- 1 FTE
- 40 or more hours/week
- 53% were certified

Did the Survey Cover Important Activities of an ICP?

Practice Results
This section describes the practice variables evaluated in the PA survey.

Remember The Survey Rating Scale?
- In your role as an ICP, considering both importance and frequency, how significant is the task to safe and effective performance?
  - 0 = Not necessary for the job
  - 1 = Minimally significant
  - 2 = Somewhat significant
  - 3 = Quite significant
  - 4 = Extremely significant

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Decision Rules

1. The task should be judged necessary for the job
   - ≥ 15.75% "non necessary" rating

2. The task should be judged as significant
   - Rating < 2.50 (significance) overall
   - Rating < 2.40 from ICPs with 2-6 yrs. Experience

3. The task should be significant to moderately-experienced ICPs
   - Rating < 2.40 in any work setting

4. The task should be significant regardless of work setting
   - Rating < 2.40 in any work setting

Decision Rules, cont.

5. The task should be significant regardless of bed capacity
   - Rating < 2.30 in any bed capacity group

6. The task should be significant regardless of hrs/week spent working in IPC
   - Rating < 2.40 in any weekly hrs. group

7. The task should be significant regardless of certification status
   - Rating < 2.40 in either certification category

Decision Rule Analysis Summary

<table>
<thead>
<tr>
<th>Rule</th>
<th>Decision Criterion</th>
<th>Tasks Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&lt; 15.75% zero frequency ratings overall</td>
<td>29, 38, 46, 50, 103, 104, 120, 125, 127, 128, 160, 161, 162</td>
</tr>
<tr>
<td>2</td>
<td>≥ 2.50 significance rating overall</td>
<td>35</td>
</tr>
<tr>
<td>3</td>
<td>≥ 2.40 significance rating in ICPs with 2-4 yrs. of experience</td>
<td>No additional tasks removed</td>
</tr>
<tr>
<td>4</td>
<td>≥ 2.40 significance rating in all work settings</td>
<td>No additional tasks removed</td>
</tr>
<tr>
<td>5</td>
<td>≥ 2.30 significance rating for all ICPs regardless of facility bed capacity</td>
<td>No additional tasks removed</td>
</tr>
<tr>
<td>6</td>
<td>≥ 2.40 significance rating regardless of hours per week worked in infection control</td>
<td>No additional tasks removed</td>
</tr>
<tr>
<td>7</td>
<td>≥ 2.40 significance rating for both certification categories</td>
<td>No additional tasks removed</td>
</tr>
</tbody>
</table>

Tasked Removed Based on Decision Making Rules (n=14)

- Utilization pre-designed surveillance software packages for IPC programs
- Contribute to the development of surveillance systems for noninfectious adverse events
- Collect data correlating pre-, intra-, and peri-operative antibiotic use with SSI rates
- Use advanced statistical techniques to describe data (e.g., z-score, Chi square, odds ratio)
- Develop competencies to evaluate IPC personnel
- Assist in writing funding proposals
- Participate in research activities (e.g., data collection, analysis)
- Conduct research in IPC either independently or collaboratively
- Participate in monitoring and evaluation of antimicrobial use

Task Removed, cont.

- Integrate cost accounting data into the analysis of healthcare associated infection reports
- Prepare and manage the IPC Program budget
- Facilitate communication of IPC information to the public and news media
- Interviewing and personnel selection
- Performance evaluation and counseling

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Revised Content Outline
Major Headings
- Identification of Infectious Disease Processes
- Surveillance and Epidemiologic Investigation
- Infection Prevention and Control
- Program Management and Communication
- Education
- Infection Control Aspects of Employee Health

Cognitive Level Descriptions
- Recall - recognition of isolated information e.g. specific facts, formulas etc.
- Application - interpretation/manipulation of data based on situation
- Analysis/Evaluation - integrating concepts to solve complex problems

Wrap-up
- Important Dates
  - January 31, 2007 detailed new content outline available on CBIC website
  - July 1, 2007 CIC examinations will be based on new content outline
- Detailed article being prepared for submission to AJIC

The Next Few Teleclasses
October 19  Hand Hygiene – Improving Compliance ... with Dr. John Boyce, Yale University
October 25  Urinary Tract Infections in Long Term Care ... with Dr. Chesley Richards, Atlanta VA Medical Center
November 2  Voices of CHICA ... with CHICA-Canada Board and guests
October 25  The Physics of Flying Feces – Can We Do Better? ... with Jim Gauthier, CIC, Providence Continuing Care

For the full teleclass schedule – www.webbertraining.com
For registration information  www.webbertraining.com/howtoc8.php

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