

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

CBIC
CERTIFICATION BOARD
OF INFECTION CONTROL
AND EPIDEMIOLOGY, INC.

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Part I

The Practice Analysis Process

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

Hosted by Paul Webber
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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

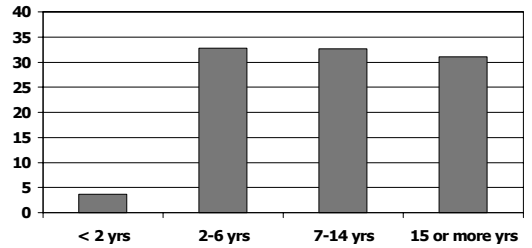
Ruth Curchoe, RN, MSN, CIC
CBIC Practice Analysis
Advisory Committee Chair

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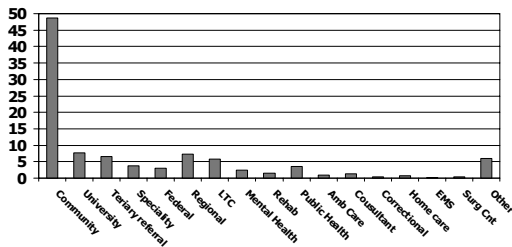
Demographic Results

This section defines demographic variables of the ICP survey respondents.

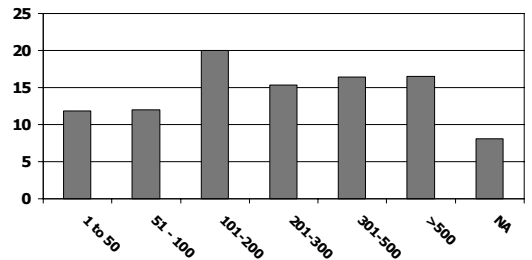
ICP Years of Experience



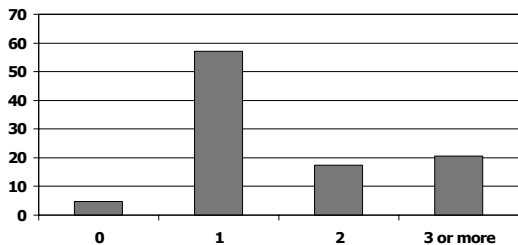
Primary Employer



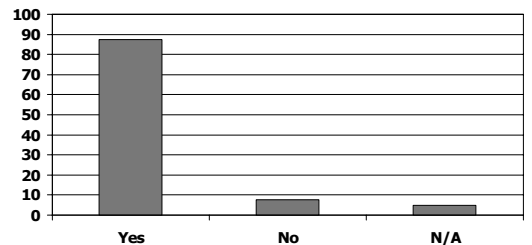
Bed Capacity



Facility ICPs



Facility Accreditation

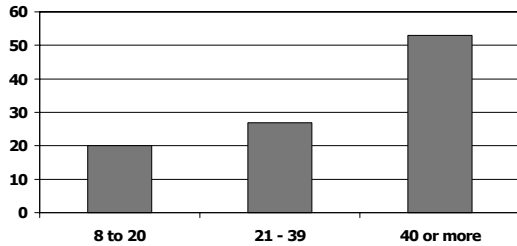


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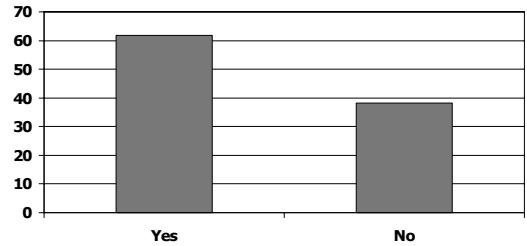
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Hours/Week Worked



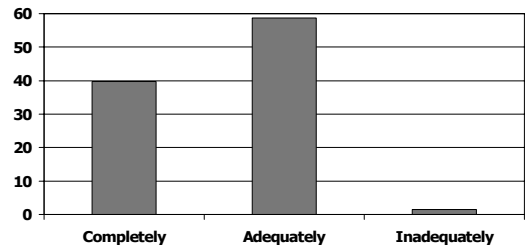
CIC Status



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
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Decision Rules

- **The task should be**
- 1. Judged necessary for the job ○ $\geq 15.75\%$ "non necessary" rating
- 2. Judged as significant ○ Rating < 2.50 (significance) overall
- 3. Significant to moderately-experienced ICPs ○ Rating < 2.40 from ICPs with 2-6 yrs. Experience
- 4. Significant regardless of work setting ○ Rating < 2.40 in any work setting

Decision Rules, cont.

- **The task should be**
- 5. Significant regardless of bed capacity ○ Rating < 2.30 in any bed capacity group
- 6. Significant regardless of hrs/week spent working in IPC ○ Rating < 2.40 in any weekly hrs. group
- 7. Significant regardless of certification status ○ Rating < 2.40 in either certification category

Decision Rule Analysis Summary

Decision Rule Analysis Summary		
Rule	Decision Criterion	Tasks Removed
1	$< 15.75\%$ zero frequency ratings overall	29, 38, 46, 50, 103, 104, 120, 125, 127, 128, 160, 161, 162
2	≥ 2.50 significance rating overall	35
3	≥ 2.40 significance rating in ICPs with 2-6 years of experience	No additional tasks removed
4	≥ 2.40 significance rating in all work settings	No additional tasks removed
5	≥ 2.30 significance rating for all ICPs, regardless of facility bed capacity	No additional tasks removed
6	≥ 2.40 significance rating regardless of hours per week worked in infection control	No additional tasks removed
7	≥ 2.40 significance rating for both certification statuses	No additional tasks removed

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)

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

Task Removed, cont.

- 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

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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



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... 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

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