



What Do YOU Want to Know about Licensing Exams?  
Ask the Experts



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**Panelists**

- **Chuck Friedman**, Session Coordinator  
Program Director, Professional Examination Service (ProExam)
- **M Jeanne Guernsey**  
Director, National Board of Medical Examiners (NBME)
- **Paul D Naylor**  
Consultant, PDN Consulting
- **John Pugsley**  
Registrar-Treasurer, Pharmacy Examining Board of Canada



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**Additional Presenters**

- YOU.....conference participants



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**How?**

- June: panelists identified hot topics
- July: survey ratings, write in questions, panelists selected topics for discussion based on ratings and write-in questions
- Today
  - Panelist provides response to question
  - Interactive i-clicker
  - Comments from other panelists
  - Audience comments

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1 Which of the following best describes the size of your testing program?

- A. Less than 200 candidates/year
- B. Less than 500 candidates/year
- C. 500-5,000 candidates/year
- D. 5,000-10,000 candidates/year
- E. More than 10,000 candidates/year

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1 Which of the following best describes the delivery method for your testing program?

- A. Paper-and-pencil administration
- B. Computer-based testing in a proctored site
- C. Online testing at home
- D. In person (practical exam, OSCE, oral exam, standardized patients)
- E. Other or multiple delivery methods

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**What are the biggest threats to exam security today?**  
**What are the best ways to keep our program secure?**



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**Has your exam program experienced any type of security breach within the last five years?**

A. Yes  
B. No

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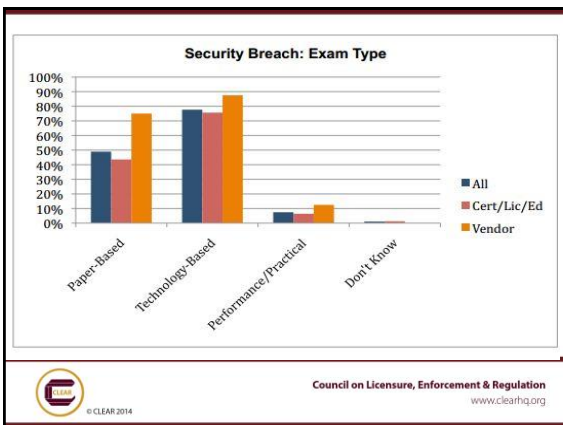
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- Notice (April 1, 2014)
- Effective immediately, the Commission on Certification for Health Informatics and Information Management (CCHIM) is **suspending administration** of AHIMA's Certified Coding Specialist (CCS) examination in all U.S. and Global Pearson Professional Centers. This action has been taken due to concerns over exam security and will continue until such time as the security and integrity of all AHIMA exams are ensured.



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### Biggest Threats to Exam Security Technology?



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### Biggest Threats to Test Security

- Candidates
  - Social Media, support groups, peer discussions
- Third Party Pirates
  - Brain dump sites, Hackers
  - Test Prep Programs
- Test Sponsors
  - "It can't happen to our program"



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### Threats to Exam Security

Best Way to Keep Program Secure?

- Program Planning
  - Messaging, Deterrence, Prevention
- Test Design (Cheat Proof Test)
  - New question formats
  - Increased number of items in banks



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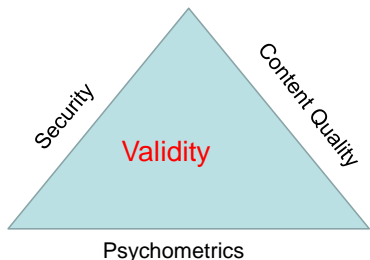
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### Threats to Exam Security



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### Is test security important?

- Where cheating is widespread, even honestly obtained test results lose credibility and certification and licensure program are de-valued?
- No easy answers
- Will examination programs remain capable of protecting the public?
- Are you willing to share your experience?



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**What is the best way to communicate rules of conduct and examination policies and procedures prior to and during the testing process?**



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**1 How well do you feel that your testing program communicates rules of conduct and examination policies and procedures prior to and during the testing process?**

A. Very well, candidates well informed  
B. Acceptable, could be improved  
C. Not well, candidates not well informed

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**Good Communication Practices**

**Prior to the testing**

- Detailed description of rules, policies and procedures on **website** and in a specific **notice to candidates** for each examination (use clear, plain language)
- Providing specific examples of what constitutes a breach of rules
- Develop a no-tolerance policy for major breaches

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**Good Communication Practices**

**Prior to the testing process:**

- Use of a website **video** that illustrates the examination procedures and highlights the rules of conduct and consequences of breaching
- Have candidates sign a confidentiality agreement when applying for each examination

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**Good Communication Practices**

**Prior to the testing process:**

- Outline the consequences of a breach of the rules:
  - Cancellation of the examination results
  - Barring the candidate for taking the examination in the future
  - Reporting the breach to regulatory body
  - Potential legal action and cost recovery
  - Provide examples of actions taken by testing bodies

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**Good Communication Practices**

**During the testing process:**

- Review key components of the rules of conduct with the candidates prior to the start of the examination
- Include rules of conduct at the front of the examination paper or computer test and ask candidates to sign that they agree to follow the rules of conduct and abide by the confidentiality agreement

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**What are the Best Methods for Measuring Continuing Competence ?**



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**i** Which of the following methods do you use to facilitate continuing competence ?

- A. Continuing Education only
- B. Pass/Fail examination only
- C. Portfolio only
- D. Self-assessment only
- E. Combination examination and another activity

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**Measuring Continuing Competence**

- Competence: *how much* you need to know/do
- Competencies: *what* you need to know
- Combine education and assessment
  - ABMS Maintenance of Certification (MOC) 2015
  - Four-part process for continuous learning
  - Licensure, CME, exam, practice assessment
  - Focus on education and practice improvement

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Ask the Experts

### Measuring Continuing Competence

- Re-examination to *measure* competence
- Practical exam considerations
  - Possible to use same exam for initial and re-certification/licensure purposes *if* demonstrate appropriateness of content, e.g., via relevancy ratings
  - Consider using common core items *as well as* unique items for specialty examinations



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### Six Core Competencies (1999)

- Adopted by ABMS and Accreditation Council for Graduate Medical Education (ACGME)
  - Professionalism
  - Patient Care and Procedural Skills
  - Medical Knowledge
  - Practice-based Learning and Improvement
  - Interpersonal and Communication Skills
  - Systems-based Practice



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### Assessing “Competencies”

- Multiple choice questions - new types
  - Access to references
  - Communication questions using audio/video
- Clinical skills exams
- 360 Reviews
- In situ observation (pediatric milestones)
- Portfolios - formative/summative



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What are the advantages and disadvantages of performance-based examinations?



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**i** Do you use performance-based examinations (e.g., Objective Structured Clinical Examinations) in your testing program?

A. Yes  
B. No



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**Performance-based Examinations**

**OSCE (Objective Structured Clinical Examination)**

- Valid, reliable method for assessment of integration of knowledge, skills and abilities
- Assesses realistic problems/tasks commonly encountered and/or critical in practice



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**What is an OSCE?**

- Series of stations through which all examinees rotate
- Trained actors (e.g., standardized patients) simulate patients/clients with specific problems
- Examinees are required to perform specific tasks essential to professional practice

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**What is an OSCE?**

- Trained assessor present in the station assesses the candidate's performance
- Performance checklists and/or global rating scales based on standardized criteria use to record and assess candidate's performance
- 2-4 hrs testing time and 8-20 stations need for reliable assessment

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**Performance Based Exams**

**Advantages**

- Evaluation of how well individuals perform roles and functions (tasks)
- Complement traditional MCQ testing methods
- Provide a unique vehicle for measurement of clinical skills:
  - permit better assessment of complex problem-solving, ethical and professional judgment and communication skills

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**Performance Based Exams**

**Disadvantages**

- Cost and resources in developing and administering performance assessments limit their use
- Less efficient and effective in testing discrete knowledge components in ensuring that candidates have the breadth of knowledge to practice safely

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**When should we consider using alternative item formats to traditional multiple choice questions? Advantages/Disadvantages?**



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**Innovative Item Types**

- Innovative item types
  - Beyond 4 option multiple choice
- Increase what we are measuring
- Candy store of options and opportunities
- Technology has opened up innovative item types

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### Innovative Item Types: Examples

- Hot Spots
- Multiple Response
- Drag and Drop
- Simulation
- Path (order)
- Discrete Option Multiple Choice
- Media



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**Protein Table**

Place each object in the right cell.

	Carbohydrate	Protein	Fat
One subunit	<input type="text"/>	<input type="text"/>	<input type="text"/>
Two subunits	<input type="text"/>	<input type="text"/>	<input type="text"/>
Three or more subunits	<input type="text"/>	<input type="text"/>	<input type="text"/>

**\*5D. Matrix Completion**



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**Mitosis**

Below are images of the phases that occur during mitosis, but they are out of order.

Put the images in order by placing them directly on the correct number.

1	2	3	4	5
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



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### Innovative Item Types

- Innovative item types should be matched to the specific construct/content
- Design item prototypes, refine, pilot test
  - Inform candidates and stakeholders
  - Iterative item writing
- Awareness of strengths and weaknesses
  - Does it add to what is being measured?
  - Cost/benefit
- Select a good match



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### Alternative Item Types

- Reality constraints
- Pragmatics
  - Cost
  - Usability, Logistics
  - Security
- Psychometric Considerations



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### What is the “Best” Method to Set Minimum Passing Scores/Standards ?



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1 How comfortable are you with your current passing score methodology?

- A. Very comfortable
- B. Somewhat comfortable
- C. Not comfortable
- D. Don't Know



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### Standard Setting Methods

- Most impactful single decision in high stakes test
- Fair for examinees and protects public
- No “best” method
- Select method based on:
  - Type of standard consistent with test purpose (criterion/content-based for high stakes competence exams)
  - Sound theory and research evidence



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### Standard Setting Methods

- All methods rely on human *judgments*
- Combine methods for better results
- Facilitate a robust **process**
- Involve panel and governance
- Apply method skillfully and use consistently



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### Standard Setting Methods - MCQ

- Modified Angoff (1971) and Hofstee (1983) Compromise Procedure
  - Advantages: “tried and true;” 2 views
  - Limitation: Angoff task difficult for judges
- Bookmark method (1990s)
  - Advantages: easier task for judges; supports multiple standards
  - Limitations: Few data points; prerequisite IRT item difficulty calibration; less research



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### Standard Setting Methods Performance Tests - SP/OSCE

- Classify examinee performances (P/F)
- Use regression model to predict point on score scale that maximizes probability of correct decisions (50% judges deem performance “P”)
- Average individual case standards to derive examination-level standard
- Determine standards by skill category?



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What information/feedback should our jurisdiction provide to candidates?



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**Does your jurisdiction provide actual scores to candidates who pass (as opposed to just “you passed”)?**

- A. Pass/fail only
- B. Pass/fail with actual scores
- C. Pass/fail with actual scores and diagnostics
- D. Pass without scores/fail with diagnostic scores



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**Information/Feedback**

Passing candidates:

- “Congratulations you passed” - no score
- Criterion referenced examination not designed to rank candidates
- Score should not be used for other purposes (Advertisements or Personal Growth)

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**Information/Feedback**

Failing candidates

- Overall score and the required passing score
- Results breakdown by content area or by sub-scores

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Ask the Experts

**Information/Feedback**

- If **domain-level** information has low reliability, programs should be cautious about reporting it to candidates and other stakeholders.
- When domain level or other specific feedback is given to candidates, guidance may be provided on interpreting that feedback on the score report itself or other publicly available information. (NCCA)

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The bar graph below is provided as a general indication of how well you answered the questions in each content area of the exam. This exam is not designed to determine your strengths and weaknesses in each content area. The bar graph is not to scale and cannot be used to calculate your total exam score.

LOW HIGH

Abstracting & Examination	██████████
Ad Valorem Taxes	██████████
Bankruptcy	██████████
Claims	██████████
Closing Procedures	██████████
Curative Issues	██████████
Conveyance	██████████

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**Information/Feedback**

- Examination study guide
- Instructions for rescheduling
- Appeal procedures

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**“Nearly Passed”**

I only missed by one question, why can't I pass?

Are there trick questions on the test?



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**Should our program restrict the number of times a candidate can repeat taking a test?**



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**Does your testing program place a restriction on the number of times a candidate can take a licensing exam?**

- A. No, it is indefensible
- B. Yes, 3 attempts
- C. Yes, 4 attempts
- D. Yes, more than 4 attempts



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**Number of Attempts**

- Concern that a candidate may pass by chance on repeated attempts
- Concern over competence of candidates who require many attempts: Protection of public is primary responsibility of licensing body
- Security issue: exposure to item bank with repeated attempts
- Repeater pass rate often low

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**Number of Attempts**

Important considerations:

- Size of item bank
- Number of test forms and frequency of item rotation
- Ability to develop new items for item bank
- Time lapse between exam attempts

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**Number of Attempts**

Important considerations:

- Historical pass rate data
- Test administration methodology
- Threats to test security

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**Should our Board consider using “remotely proctored” on-line testing?**



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**Remote Proctoring**

- Remote Online Proctoring
  - Proctor over the internet
- Monitor individual test administration
- Replaces bricks/mortar “eyes in the room” proctoring
- Set-Up:
  - Webcam, microphones, continuous internet
  - Offsite proctors
  - Encrypted test, lock down computer

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**“Remotely proctored” on-line testing?**

- Cost benefit analysis
  - Appropriate to purpose and program
- Improved technology
  - Cameras, audio, facial recognition, keystroke
- Social and cultural changes and acceptance
- Licensure: not now, if or when??
- Maintenance of Certification, self assessment

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What is on the horizon in the next five years that will affect licensure and certification testing?



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**Future?**

- Testing: redefined-not only knowledge/skills
  - Ethics, Communication, Empathy, Professionalism, Teamwork
- Public Protection: redefined, sun-setting
- Challenges/Opportunities
  - Technology
  - Security and social media
- Competence measurement-outcomes

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**Future?**

- Performance testing
  - Simulation
  - Beyond traditional MCQ testing
- Meaningful score reports
- Industry changes: increased consolidation
- Generational challenges
  - On line testing
  - New expectations

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