

2015 iCE EXCHANGE

OCTOBER 27-30

PORTLAND MARRIOTT DOWNTOWN WATERFRONT

PORTLAND, OREGON



iCE Institute for
Credentialing
Excellence™

Small-Scale Credentialing Programs

Balancing Security, Fairness, and Candidate-Friendliness



Session Overview

- Introduction to some issues, challenges, and potential solutions related to small-volume credentialing programs.
- Examples from industry
 - » Optometry
 - » Hearing Healthcare
- Q&A

Presenters

- Brett Foley, Ph.D.
 - » Psychometrician
 - » Alpine Testing Solutions
- Jack Terry, O.D., Ph.D.
 - » Executive Director
 - » National Board of Examiners in Optometry
- Joy Wilkins, B.A.
 - » Director of Professional Development
 - » International Hearing Society

Desirable Exam Features

- Security*
- Fairness*
- Candidate Friendliness

*Prioritized in professional standards/guidelines

Security Focus

- One tenet:
 - » Limit item exposure

- Possible solutions:
 - » Adaptive tests
 - » Multiple test forms

Fairness Focus

- One tenet:
 - » Equivalence of performance expectations

- Possible solutions:
 - » Use same form
 - » Equate forms
 - » Re-set standards (i.e., new standard setting)

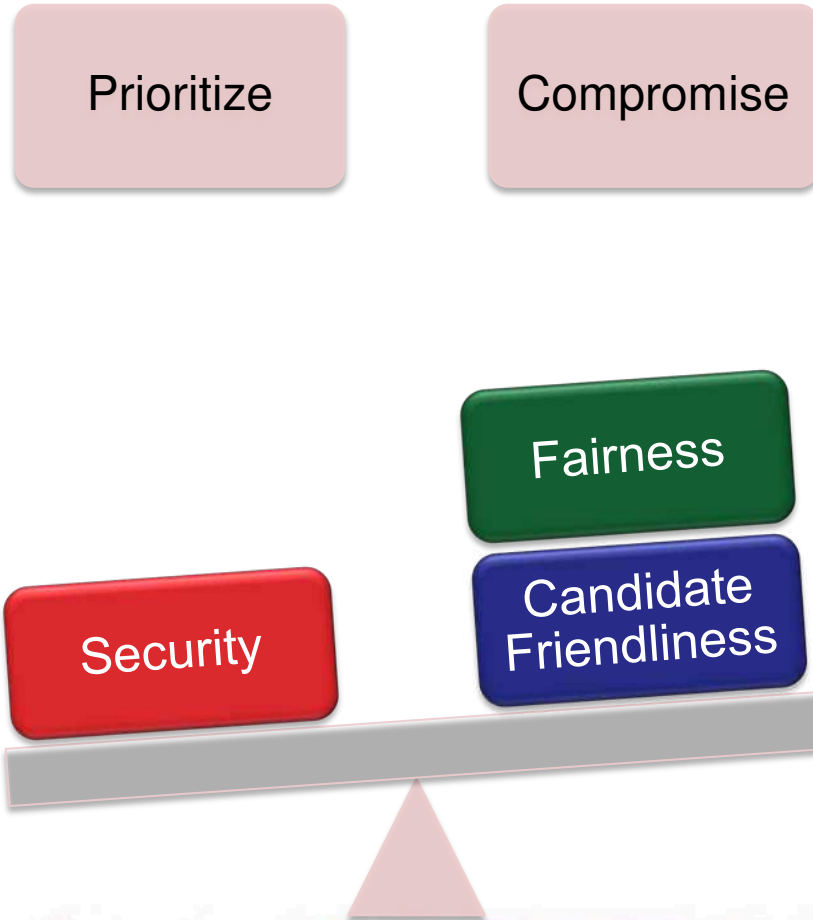
Candidate Friendliness Focus

- Nice Features
 - » Reasonable test lengths (not too long)
 - » Quick results
 - » Flexible scheduling

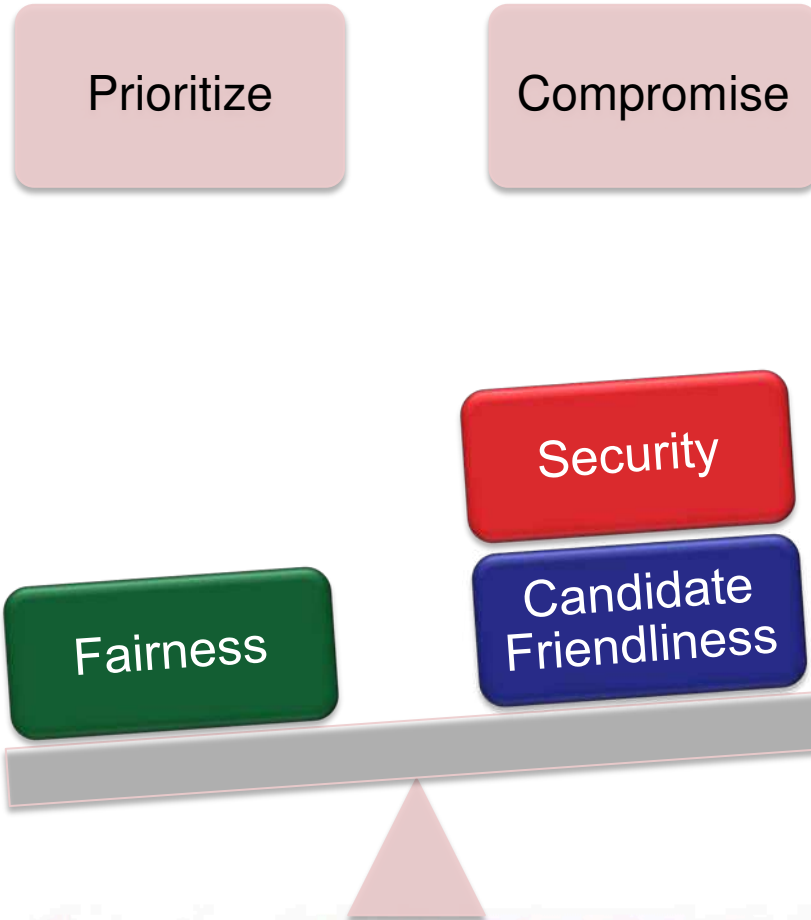
The Effect of Candidate Volume

- Large volume programs:
 - » Possible to select idealized/optimal solutions for all three areas
- Small volume programs:
 - » Must prioritize/compromise

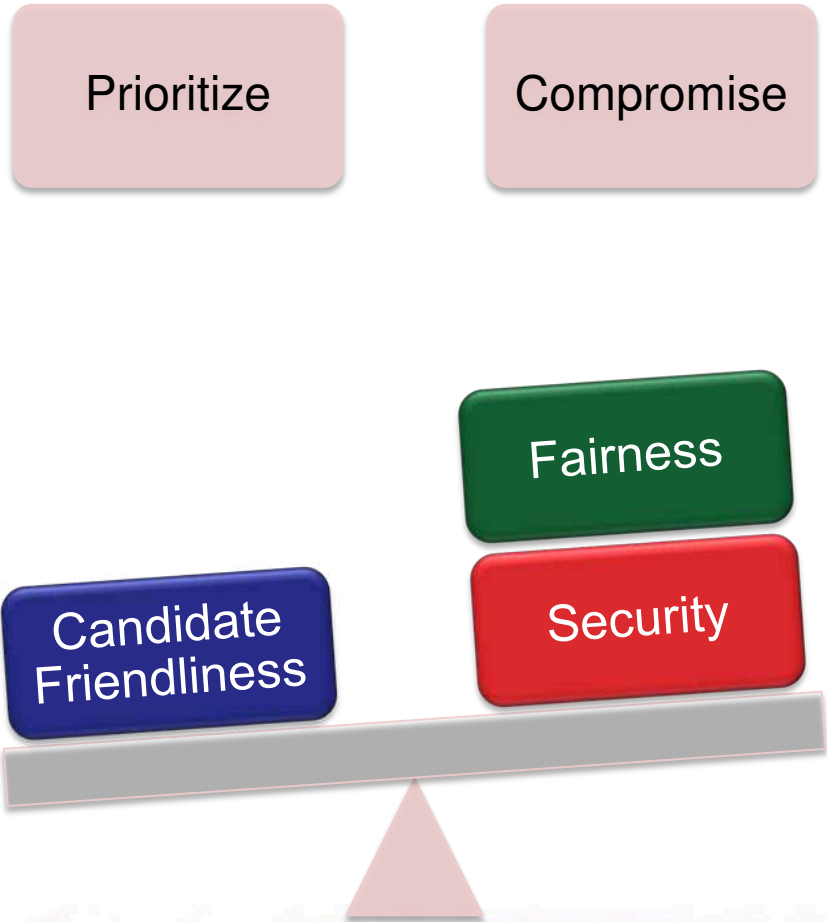
Example: Frequent form changes



Example: High equating confidence



Example: Immediate score reporting



Emerging, Supportive Research

- Equating works reasonably well (and better than alternatives) with small samples
 - » Livingston & Kim (2009)
 - » Dwyer & Talley (2012)

- Form re-use does not advantage retakers
 - » Raymond, Neustel, & Anderson (2007, 2009)
 - » Feinberg, Raymond, & Haist (2015)



NATIONAL BOARD OF EXAMINERS IN OPTOMETRY

Continued Professional Development in Optometry (CPDO) Exam

Purposes of the CPDO Exam

- Periodically assess licensed practitioners' optometric knowledge regarding *life or sight issues*
- Identify existing knowledge gaps
- Provide direction toward lifelong learning
- Document professional development
- Provide continuing education credit
- **Serve as one pathway toward qualification for NBEO-BC Board Certification***
- Contribute toward the protection of the public health and welfare

*Cut score needed

CPDO Test information

Volume:

- » First form: 34 candidates
- » Second form: 18 candidates
- » Third form: 20 candidates
- » Fourth form: 18 candidates

Continued Professional Development in Optometry (CPDO) Exam

- **Exam Specifics**

- » Points may be accumulated from 3 different *item types*:
 - *Cases, Mini-cases, Solos*
- » Exam that will consist of 160 points, to be tested over 3.5 hours.

Continued Professional Development in Optometry (CPDO) Exam

- 20 patient cases
80 points: average of 4 MC or MR items each
- 40 solo items
40 points: standard, individual MC or MR items
- 20 minicases (with 2 items each)
40 points: each with a paragraph of patient findings, each with 2 MC or MR items (diagnosis, clinical science correlation, pathophysiology, or treatment/management)

Continued Professional Development in Optometry (CPDO) Exam

- Categories: The “**sight and life**” categories that are included on the CPDO assessment include the following:
 - Lids - Lashes - Lacrimal System - Ocular Adnexa - Orbit
 - Conjunctiva - Cornea - Refractive Surgery
 - Lens - Cataract - IOL - Pre-Operative and Post-Operative Care
 - Episclera - Sclera - Anterior Uvea
 - Vitreous - Retina - Choroid
 - Optic Nerve - Neuro-Ophthalmic Pathways
 - Glaucoma
 - Emergencies - Trauma
 - Systemic Health

[NBEO Exams](#)[Exam Information](#)[Test Day](#)[Scoring](#)[Registration](#)[Examiners](#)[General](#)[Directory](#)[Part I \(Applied Basic Science\)](#)[Part II \(PAM\)](#)[Part III \(Clinical Skills\)](#)[TMOD](#)[CPDO](#)[ACMO](#)[Sample Test Items](#)[CSE Evaluation Forms](#)

- :: [Trade/Generic Drug List](#)
- :: [Clinical/Laboratory/Dosage List](#)
- :: [Patient Case Template](#)

[▶ NEWS and NOTES](#)

:: June 5, 2014
Scores for the April 2014 Part III CSE and ISE examinations have been posted online.
- [View Now](#)

:: May 19, 2014
Scores for the April 2014 Part II PAM and TMOD examinations have been posted online.
- [View Now](#)

CPDO™ Examination

- Click [here](#) to access the **NBEO-Board Certification™ Website**
- Click [here](#) to **register** for the **2014 CPDO Examination**
- Click [here](#) to view the **Pearson VUE CPDO Exam Tutorial**
- Click [here](#) for a list of **Pearson VUE Test Centers**
- Click [here](#) to view a **suggested list of CPDO Study Topics**
- Click [here](#) to view CPDO sample **Patient Cases**
- Click [here](#) to view CPDO sample **Solo Items**
- Click [here](#) to view CPDO sample **Minicases**
- Click [here](#) to view **Pearson VUE Screen Shots of patient case, solo item, and minicase**
- Click [here](#) to view the **CPDO Trade/Generic Drugs list**
- Click [here](#) to view the **CPDO Clinical/Laboratory/Dosage Abbreviations list**
- Click [here](#) to view the **CPDO Patient Case Template**

CPDO exam background

The subject matter included within the CPDO examination is intended to assess practice-level knowledge and experience in ocular disease and related systemic conditions. CPDO candidates have completed their formal academic education and have been out in the professional world for a wide variety of time intervals. Ideally, they have been practicing all facets of current scope-of-practice optometry as they consistently have updated their knowledge bases through continuing education activities.

However, CPDO candidates may practice at different levels across all areas of 'life and sight' optometry. Therefore, the incidence and prevalence of the case ocular conditions, as well as the subtlety of the clinical findings, are of varied difficulty levels to accommodate the different professional experiences.

Since the CPDO examination is designed for seasoned clinicians, some relatively infrequently encountered disease subject matter topics are presented in this examination. Conversely, cases involving common, straightforward ocular disease conditions are equally valuable to the assessment to provide a wide range of exam material sophistication. CPDO study topics can be viewed by clicking [here](#). Though all CPDO subject

Pearson VUE CPDD Tutorial - Candidate Name

Image 1





Image 2



Item 1 of Patient 1
Which of the following is the most likely diagnosis?

- A. Bacterial keratitis
- B. Endemic keratitis conjunctivitis
- C. Fungal keratitis
- D. Herpes simplex keratitis
- E. Syphilitic interstitial keratitis
- F. Herpes zoster keratitis

OE NUMBER:

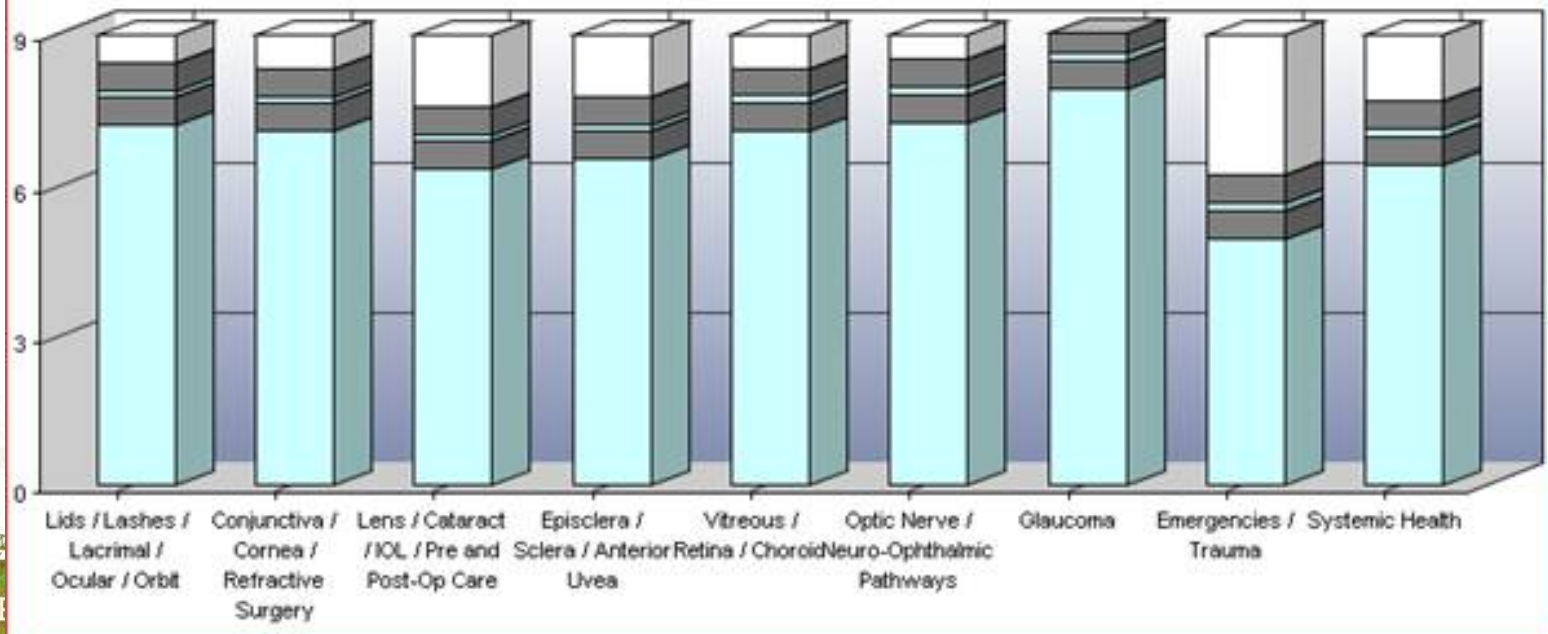
CONDITION	Your Pts / Total Pts
1. Lids / Lashes / Lacrimal / Ocular / Orbit	14 / 16
2. Conjunctiva / Cornea / Refractive Surgery	25 / 29
3. Lens / Cataract / IOL / Pre & Post-Op Care	7 / 9
4. Episclera / Sclera / Anterior Uvea	12 / 15
5. Vitreous / Retina / Choroid	19 / 22
6. Optic Nerve / Neuro-Ophthalmic Pathways	15 / 17
7. Glaucoma	22 / 23
8. Emergencies / Trauma	5 / 8
9. Systemic Health	15 / 19
	134 / 158

Your Raw Score: 134

In evaluation of your performance, compare your raw score with the raw pass-fail cutoff score below.
Your Pts / Total Pts - number of points from items that you answered correctly / number of points from items scored (excluding deleted items)

This diagnostic report is for your personal use to help you identify your relative strengths and weaknesses.
 No pass / fail decisions are made on the basis of these data.

Stanine Scores



Low Volume Issues

- Primary Constraints:
 - » Security is prioritized
 - » Extensive candidate feedback provided
- Resulting need:
 - » New form for each administration

Low Volume Solution

- Compromise
 - » Discrete administrations
 - » Delayed score reporting
- Area of Concern
 - » Equivalence of expectations across forms
 - » Expense and sampling variability from repeated standard settings
- Safeguards
 - » Small volume equating method (e.g. Circle-arc equating)
 - » Large equating block



International Licensing Examination for Hearing Healthcare Professionals

International Licensing Examination for Hearing Healthcare Professionals

The primary purpose is to accurately identify candidates with the knowledge, skills, and abilities necessary for safe and effective entry-level practice as a dispensing professional.

- Dichotomous Scoring
- 80 scored items

International Licensing Examination for Hearing Healthcare Professionals

U.S. States:

- | | | |
|----------------|-------------------|--------------------|
| 1. Alabama | 14. Kentucky | 27. New Mexico |
| 2. Arizona | 15. Louisiana | 28. North Dakota |
| 3. Arkansas | 16. Maine | 29. Ohio |
| 4. Colorado | 17. Maryland | 30. Oregon |
| 5. Connecticut | 18. Massachusetts | 31. Rhode Island |
| 6. Delaware | 19. Minnesota | 32. South Carolina |
| 7. Florida | 20. Mississippi | 33. South Dakota |
| 8. Georgia | 21. Missouri | 34. Tennessee |
| 9. Hawaii | 22. Montana | 35. Texas |
| 10. Idaho | 23. Nebraska | 36. Utah |
| 11. Illinois | 24. Nevada | 37. Virginia |
| 12. Indiana | 25. New Hampshire | 38. Washington |
| 13. Iowa | 26. New Jersey | 39. Wyoming |

Canadian Provinces:

1. British Columbia
2. Manitoba
3. Nova Scotia
4. Ontario

2013-2015 Candidates & Administrations

Total number of...	2015 (thru June)	2014	2013
Administrations:	618	1,140	1,097
Paper/Pencil Administrations:	109	530	1,034
Computer Administrations:	508	610	63
Candidates:	562	881	842
New Candidates:	373	703	790

Low Volume Issues

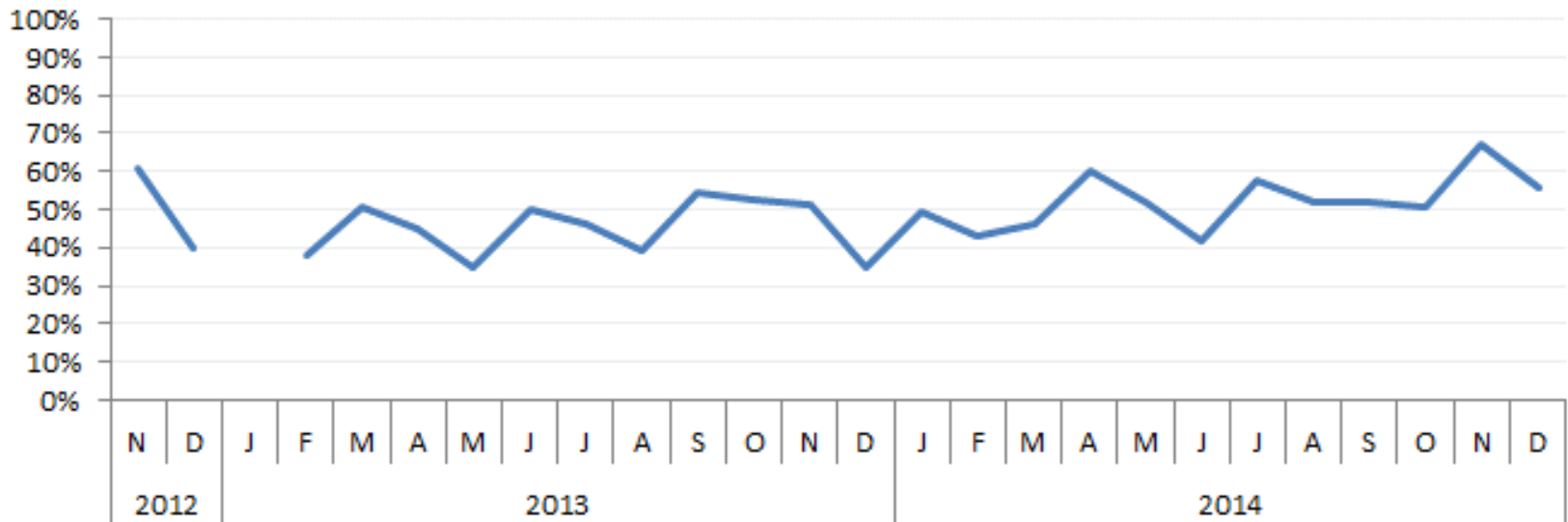
- Primary Constraints:
 - » On-demand administration
 - » Near-immediate score reporting (within a few days)
 - » Limited seat time (small pilot item set)
- Resulting needs:
 - » Pre-equated scores
 - » Items must be piloted before use in scoring

Low Volume Solution

- Compromise
 - » One form in use at a time
 - » Same form is reused
- Area of Concern
 - » Item exposure
- Safeguards
 - » Pass rate monitoring
 - » Regular health checks (i.e. psychometric analysis)
 - » Minimal feedback to candidates (pass/fail only)

Monitoring Pass Rates as a Security Precaution

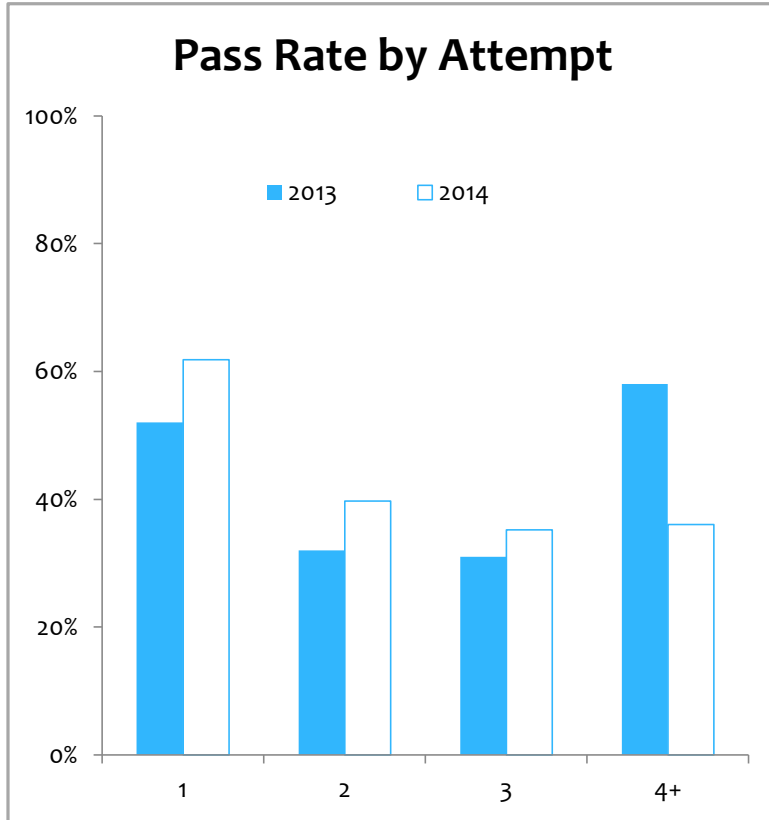
Pass Rate Trend Over Time



*January 2013 omitted due to small number of administrations

The pass rate has remained fairly stable over time, typically ranging from approximately 40% to 60%.

Monitoring Pass Rates as a Security Precaution



of Administrations 2014, by Attempt

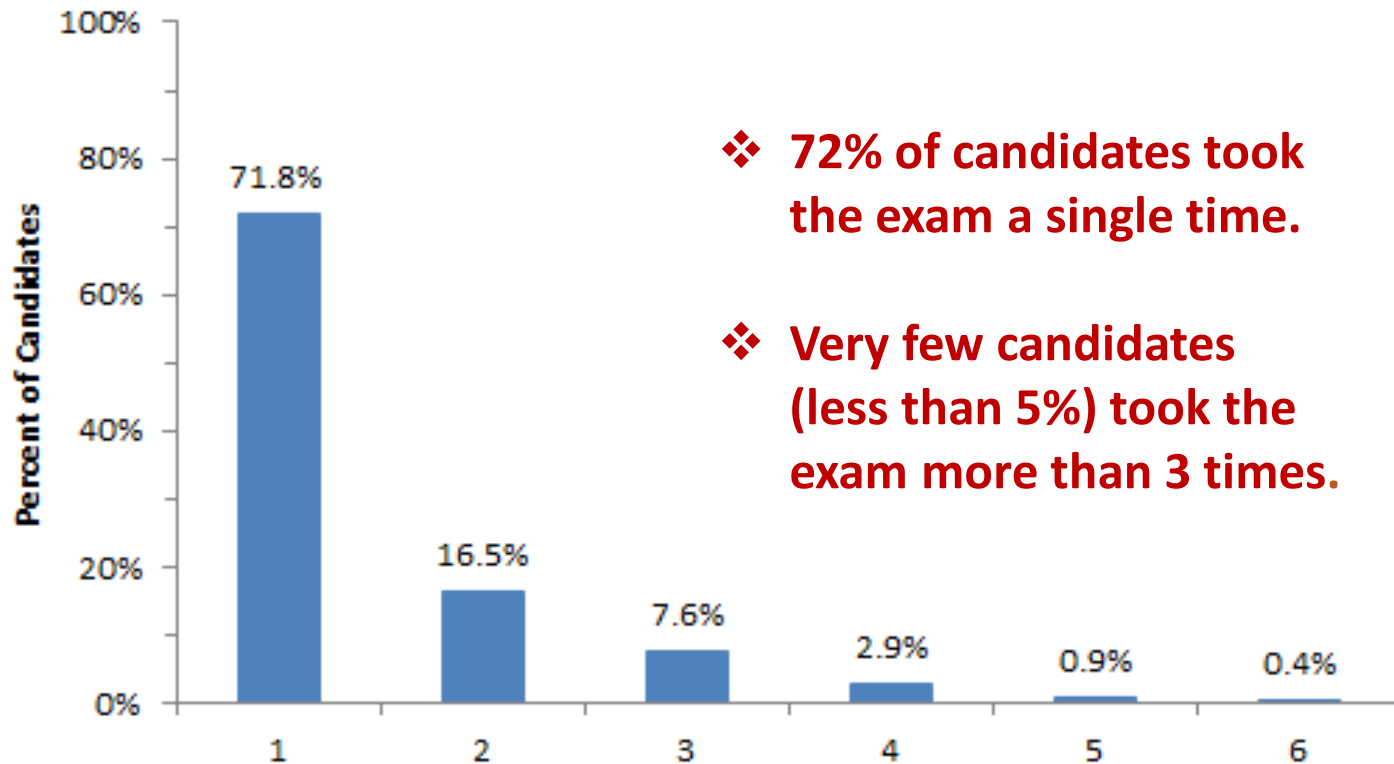
<u>Attempt Number</u>	<u>Number of Administrations, 2014</u>
1	703
2	229
3	122
4	58
5	19
6	7
7	1
8	1

HIGH ability candidates tend to pass on their 1st try

Monitoring Retake Activity

How many times do candidates attempt the ILE?

Oct. 2012 - Dec. 2014



- ❖ **72% of candidates took the exam a single time.**
- ❖ **Very few candidates (less than 5%) took the exam more than 3 times.**

Regular Health Checks, Item Development, and New Form Creation

Job Task Analysis activities begin

Competency Model and test blueprint finalized

Passing score determined

Transition to new Competency Model

New passing score determined

New Survey of Hearing Professionals

2011

2012

2013

2014

2015

2016

Survey of Hearing Professionals

Pilot testing begins

New Job Task Analysis activities begin

New Competency Model and test blueprint finalized

Pilot testing begins for test based on new Competency Model

- ☆ Item Writing Meeting
- ◎ Item Review Meeting
- ⊕ Health Check Analysis
- ⊗ Form Creation

Note: Events in *italics* are in-progress/forthcoming

Audience Q&A



Contact Information

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