Conference for Food Protection
Executive Board Meeting Committee Report

This report must be submitted to your Council Chair for review so that it can be approved and submitted to the Executive Board via the Executive Director 30 days before each Executive Board Meeting (held in April and August of each year). The report must be accompanied by an updated committee roster on the Excel spreadsheet provided (Committee Members Template) located here: http://www.foodprotect.org/work/.

COMMITTEE NAME: Food Protection Manager Certification Committee

COUNCIL (I, II, or III):   Executive Board through Council II

DATE OF REPORT: April 10, 2015

SUBMITTED BY: Jeff Hawley, Chair

COMMITTEE CHARGES: (indicate Issue Number and text from Issue stating the Committee Charge)

Issue #: 2014 II-012

Charges:
1. Continue working with the CFP Executive Board and the American National Standards Institute (ANSI)-CFP Accreditation Committee (ACAC) to maintain the Standards for Accreditation of Food Protection Manager Certification Programs in an up-to-date format.

2. Evaluate the results of the exam security evaluation process and Standards revisions approved by the 2012 CFP Biennial Meeting to ensure that they are resulting in substantial improvement of exam security.

3. Report back to the Executive Board and the 2016 Biennial Meeting of the Conference for Food Protection.

Issue #: 2014 II-015

Charge:
The Food Protection Manager Certification Committee (FPMCC) determine the process and requirements for potential acceptance of the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17024-2012 for food protection manager certification as an additional option to and without impact on the existing CFP Standards for Accreditation of Food Protection Manger Certification Programs and report back its findings at the 2016 Biennial Meeting.

COMMITTEE'S REQUESTED ACTION FOR BOARD (If Applicable):

Approve revised committee roster for 2014-2016 (see attachment).

PROGRESS REPORT / COMMITTEE ACTIVITIES WITH ACTIVITY DATES:

The Food Protection Manager Certification Committee (FPMCC) met April 1-2, 2015 in Milwaukee, Wisconsin.

Issue #: 2014 II-012, Charge 1. Continue working with the CFP Executive Board and the American National Standards Institute (ANSI)-CFP Accreditation Committee (ACAC) to maintain the Standards for Accreditation of Food Protection Manager Certification Programs in an up-to-date format.

The FPMCC <u>Standards Workgroup</u>, chaired by Kate Piche, recommended editorial revisions to the CFP Standards. This included punctuation, italics, capitalization, and other non-substantive changes. Revisions were accepted unanimously by the Committee.

This workgroup was asked by Chair Hawley and the Committee to identify items in the CFP Standards that could be made less prescriptive without negative effect on security improvement. After significant discussion the charge to the workgroup was clarified. The Workgroup was asked to review the Standards, and produce a document that recommends specific reduction in prescription and the security impact (positive, negative, or unknown) for each recommendation; and report back to the FPMCC at their fall 2015 meeting.

Issue #: 2014 II-012, Charge 2. Evaluate the results of the exam security evaluation process and Standards revisions approved by the 2012 CFP Biennial Meeting to ensure that they are resulting in substantial improvement of exam security.

To evaluate the data, and determine if the new security standards are effective, the first step was to establish a baseline from before the new standards were implemented. Certification providers were asked to provide security data collected from July 1, 2009-June 30, 2010. Dr. Donald Ford (ANSI) aggregated the data and reported in summary for all 3 certification providers.

The next step was for the certification providers to use the new data collection documents in a pilot program. Certification providers were asked to gather security data from July 1, 2012-June 30, 2013, and submit the information to Dr. Ford for an aggregate evaluation.

Following the pilot program, certification providers gathered security data based on the new standards from July 1, 2013-June 30, 2014, and submitted the information to Dr. Ford.

Data collected from the certification providers for July 1, 2009-June 30, 2010, was compared to data collected for July 1, 2013-June 30, 2014, to evaluate the effectiveness of the new security standards adopted at CFP 2012 biennial meeting.

Dr. Don Ford presented his report to the FPMCC on April 2, 2015 (see attachment). This is a summary of his findings:

Goal 1: Enforce Proctor/Administrator Disciplinary Actions.
The percentage of test administrators/proctors who committed violations decreased from 2009-10 to 2013-14 from 5.72% to 4.4%. Violations included:
- Failure to return exams/answer sheets on time
- Failure to return all materials, or to sign/seal return envelopes
- Failure to use a traceable shipping carrier
- Failure to follow proctor guidelines, including not being present the whole time or allowing test-takers to self-proctor
- Suspected/confirmed cheating or colluding with test takers

Probable reason for reduction in violations: All test administrators/proctors were retrained by the certification providers.

Goal 2: Reduce Exam Packaging and Shipping Irregularities (lost exams/answer sheets).
There was an increase in reported lost materials from 2009 to 2013: 0.01% to 0.02%. Percentage of lost exams/answer sheets has remained steady at 0.02% over the last 2 years.
Note: We may have reached a theoretical limit in preventing lost exams/answer sheets. Current safeguards are effective in majority of cases, but zero losses appears to be unattainable under the current system of testing.

Goal 3: Reduce Test Site Irregularities.
Test Administration problems show big increase: less than 0.5% to 3.19%, while test site problems remain small at 0.01%. The increase in test administration irregularities was probably due to better detection and reporting rather than an actual increase in incidents. Greater focus on test administration and test site irregularities is helping to uncover previously unreported problems.

Most Frequent Reasons for Test Site Irregularities in 2014
- Candidate demographic changes (wrong name or other personal information at registration)
- Exam was given in a restaurant during service or otherwise interrupted by outside noise
- Examinees were allowed to sit too close together
- Technical issue with online testing site hardware

Most Frequent Reasons for Test Administration Irregularities
- Failure to follow shipping policies for returning materials on time
- Failure to properly return all materials via traceable carrier
- Failure to follow policies and procedures for proctoring – partially unproctored or self-proctored exams
- Cheating or collusion: candidates were allowed to talk in a foreign language during the exam, proctor colluded in cheating, candidates shared notes during exam

Goal 4: Reduce Cheating and Test Administration Irregularities.

Confirmed/suspected cases of cheating went from 10 in 2009-10, to 16 in 2012-13, to 13 in 2013-14.
Better detection, reporting and enforcement resulted in more confirmed cases initially.

Most Frequent Corrective Actions Taken To Combat Cheating
- Use multiple versions of the exam at each administration
- Revoke proctor privileges for collusion
- Enforce spacing and other environmental guidelines
- Use biometrics to verify examinee identity
- Require examinees to retest when cheating is suspected
- Adopt better exam forensic analysis methods
- Increase exam session audits

Percentage of test administration violations decreased from 0.24% in 2009-10 to 0.14% in 2013-14. This decrease is a result of better detection and enforcement.

Goal 5: Improve Test Quality Assurance
2009-10: Only 1 of 3 providers had a QA system installed, and it was incomplete.
2012-13: All 4 providers had QA system in place, but still implementing some features.
2013-14: QA system fully functional for all providers.

QA elements include:
- Document control
- Internal audit
- Management review
- Exam security plan
- External audit/certification

After implementing the security measures from the Standards adopted in 2012, security of the test administration process has improved, and the number of breaches has dramatically decreased.

Much progress has been made, but there is still room for improvement. More can be done to standardize test administration and minimum standards for test sites. Recommendations have been implemented, and have led to measurable improvements in test administration security. Providers will continue with their efforts in these areas.

Proctors/Administrators:
- Increase screening, selection and training standards
- Continue to vigorously apply disciplinary actions against offenders

Shipping Irregularities:
- Use traceable carriers only, especially those with high reputation for security and reliability
- Continue to enforce rules for shipping

Test Sites/Administration:
- Standardize test site requirements across all providers
- Share best practices for administration

Test Cheating:
- Share best practices for data forensics and cheating detection

- Encourage test-takers to report cheating (whistleblower hotline)

QA System:
- Fully implement all features for all providers
- Use it as preventive mechanism and early warning system

The Security Evaluation Workgroup was reformed and charged to review the recommendations by Dr. Ford to continue improvements in the exam security self-reporting process, and report to the FPMCC at the next meeting in fall 2015. The workgroup is comprised of Chapman (Chair), Guzzle, Williams, Kinder, Coleman, Corchado, Piche, Douglas, McMillion, and Dr. Ford as advisor.

Issue #: 2014 II-015, Charge: The Food Protection Manager Certification Committee (FPMCC) determine the process and requirements for potential acceptance of the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17024-2012 for food protection manager certification as an additional option to and without impact on the existing CFP Standards for Accreditation of Food Protection Manger Certification Programs and report back its findings at the 2016 Biennial Meeting.

Workgroup Chair Hollenbeck reported on the workgroup's activity, including that a line by line comparison of the CFP Standards and ISO 17024 was undertaken. The workgroup formed three subgroups to manage the tasks, and consensus was reached among the workgroup on the products of the subgroups. FPMCC members were provided a detailed 37 page document with a line by line comparison and "equivalencies". An additional 12 pages of ISO 17024 were identified that would need to be addressed to determine equivalency of the two standards.

After considerable discussion the FPMCC could not reach consensus, so the issue was tabled until the FPMCC meeting in fall 2015. Committee members were advised to review the Standards Comparison Workgroup report, and be prepared to reach resolution at the FPMCC fall 2015 meeting.

OTHER COMMITTEE INFORMATION:

The Logistics Workgroup will start researching locations and dates for the fall 2015 FPMCC meeting.

The Communications Workgroup was asked to identify and contact potential consumer members to gauge interest, obstacles, and prospects for participating on the FPMCC.

ANSI
American National Standards Institute

**Security Evaluation Work Group
Baseline & Summative Self-Report Findings
2013-14**

Donald J. Ford, Ph.D.
Lead Assessor, ANSI Certificate Accreditation Program &
Lead Evaluator, Certified Professional Food Manager Program

Slide 1
December 2014

SEWG Background

Food Safety
it's our business

- Work Group formed to address test security concerns involving the CPFM exam under ANSI CFP certification
- Dr. Ford, ANSI CAP Assessor, designed and conducted a 5 year evaluation study of past, current and future test security breaches and the impact of remedies that CFP implemented starting in 2011.
- Evaluation proceeded in three stages:
  1. Baseline study of the 2009-10 year to pilot test self-report data collection and establish a pre-assessment point from which to measure progress
  2. Interim study of the 2012-13 year to assess progress in addressing test security issues
  3. **Post-assessment of the 2013-14 year** and future years to measure progress and track trends in CPFM test security

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Slide 2

Evaluation Methodology

Single Group Pre-Post Design

M_1 ▓▓▓▓ I ▓▓▓▓ M_2 ▓▓▓▓ M_3

M = measurement (1 = Pre, 2 = Formative 3 = Post) I = Interventions

- Self-reporting via questionnaire
- Data aggregated and reported as single group only (no within-group comparisons)
- Time Periods:
  - Baseline (Pre) – July 2009 – June 2010
  - Pilot (Formative) – July 2012 – June 2013
  - **Post (Summative) - July 2013 – June 2014**
  - Trending – Annually after 2014 as part of ANSI surveillance

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Summary of Evaluation Findings

- Small number of test security violations, but once is one too many
- About 4% of proctors/administrators are disciplinary problems, but numbers are declining
  - Better screening, selection, and discipline are working
  - 100% compliance on retraining achieved
- Test administration and shipping irregularities continue to be problematic
  - Better tracking and enforcement of existing rules needed
  - May be reaching theoretical limits of compliance, given current testing methods

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Slide 4

Summary of Evaluation Findings (cont'd)

- Significant efforts being made to prevent test security breaches
  - Best practices should be disseminated to all providers
- Management QA System fully implemented in 2012-13
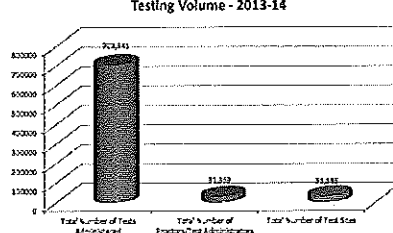- Continue to monitor test security as part of ANSI annual surveillance

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CPFM is a Big Deal

Testing Volume - 2013-14

- Large numbers pose challenges for close policing
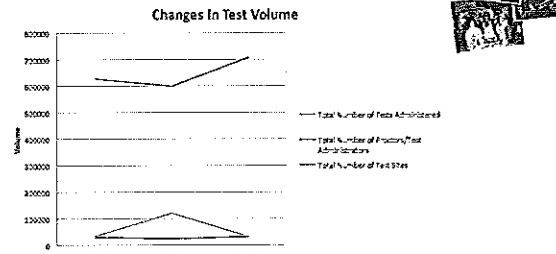
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Testing Volume Trend: 2009-2014

Changes In Test Volume

- Test Volume and Test Sites show no clear pattern; # of Proctors/Administrators shows little change.
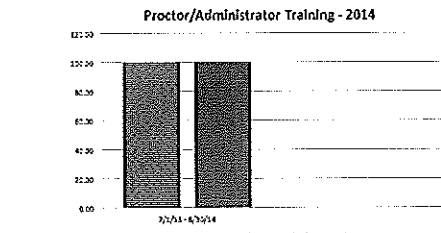
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Goal One: Provide Regular Training for Proctors/Administrators

Proctor/Administrator Training - 2014

- Goal has been achieved with 100% compliance.

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Summative Evaluation Report

Change in Retraining: 2009-2014

Proctor/Administrator Training - 2009-2014
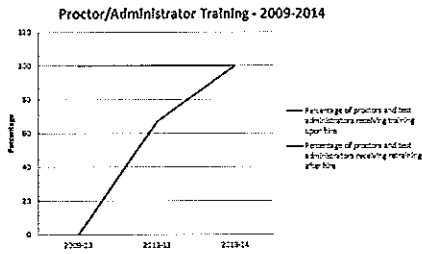
- All Retraining completed in 2014.

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Goal One: Enforce Proctor/Administrator Disciplinary Actions

Percentage of Proctors w/ Disciplinary Issues - 2013-14
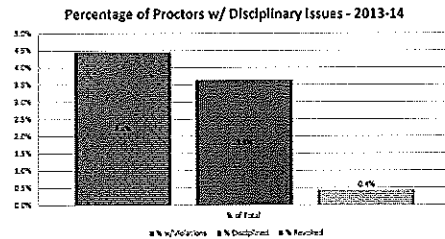
- In 2014, violations decreased while revocations increased, indicating greater enforcement.

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Changes in Proctor/Administrator Disciplinary Actions: 2009-2014

Percentage of Proctors/Administrators w/ Disciplinary Issues: 2009-2014
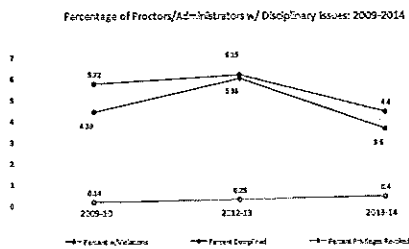
- Disciplinary issues initially went up, then down, while revocations have steadily increased.

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Primary Reasons for Violations - 2014

1. Failure to return exams/answer sheets on time
2. Failure to return all materials, or to sign/seal return envelopes
3. Failure to use a traceable shipping carrier
4. Failure to follow proctor guidelines, including not being present the whole time or allowing test-takers to self-proctor
5. Suspected/confirmed cheating or colluding with test takers

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Summative Evaluation Report

Most Common Disciplinary Actions

WARNING
Correct actions are **OUT OF COMPLIANCE**
constituting a violation
written policy on this li

1. Warning for 1st offense, probation/suspension/ revocation for repeated offenses
2. One year probation/suspension for second offense
3. Revocation of privileges for colluding in cheating; suspected examinees required to re-test

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Most Frequent Reasons for Revocation/ Suspension of Proctors

1. Resignation from the position (about 100 cases)
2. Confirmed/suspected case of cheating with proctor/administrator collusion, such as providing answers/coaching or allowing examinees to discuss test or use notes during exam (about 30 cases)

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Goal Two: Reduce Exam Packaging and Shipping Irregularities

Percentage of Lost Test Booklets/Answer Sheets - 2013-14

Lost Exams/Completed Answer Sheets
% Exams Lost   # % Answer Sheets Lost

- In 2013-14, 2 out of 10,000 exams lost, the same rate as last year. Lost answer sheets are exceedingly rare.

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Most Frequent Reasons for Lost Exams/ Answer Sheets: 2013-14

1. Proctors improperly disposed of unused exams – shredding or trashing
2. Carrier lost the package
   - Regular mail is not reliable
   - Even traceable carriers lose packages sometimes (19 answer sheets lost in 2013-14)
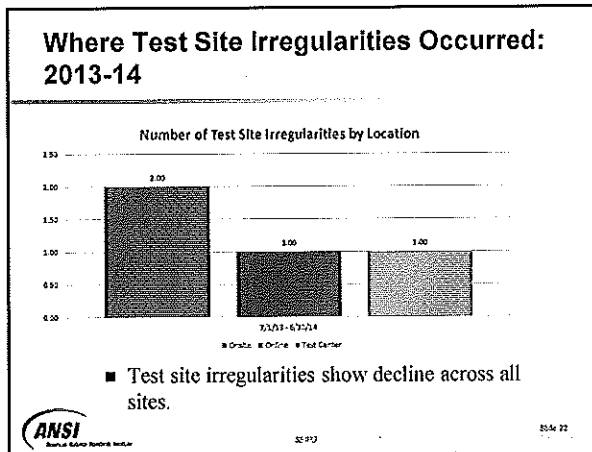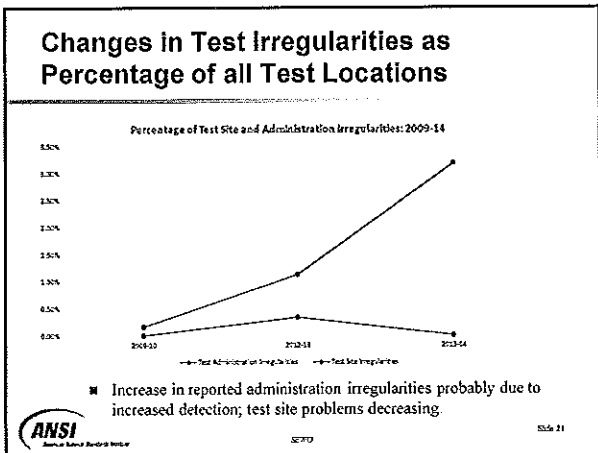3. Proctors lost extra exams/answer sheets; presumed stolen

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Changes in Lost Materials: 2009-2014

Change in Lost Booklets/Answer Sheets as Percentage of all Test Administrations: 2009-2014

- Increase in reported lost materials from 2009 to 2013, steady to decreasing in 2013-14.

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Goal Three: Reduce Test Site Irregularities

TESTING DO NOT DISTURB

Percentage of Test Site and Administration Irregularities - 2013-14

- In 2013-14, Test Administration problems show big increase, while test site problems remain small.

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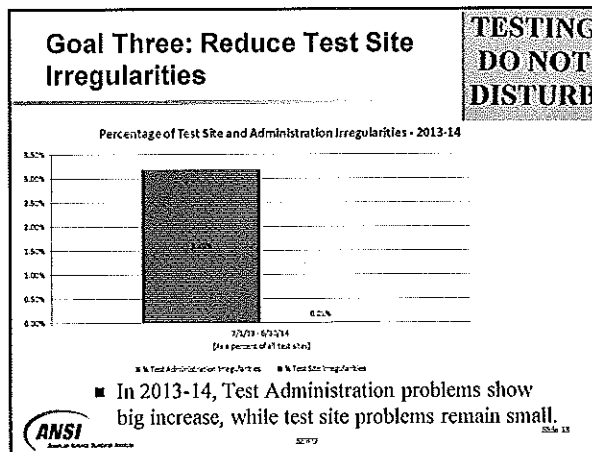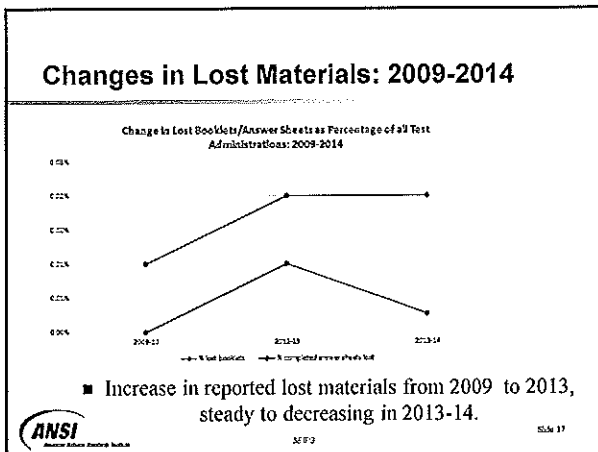
Most Frequent Reasons for Test Administration Irregularities

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Most Frequent Reasons for Test Site Irregularities in 2014

1. Candidate demographic changes (wrong name or other personal information at registration)
2. Exam was given in a restaurant during service or otherwise interrupted by outside noise
3. Examinees were allowed to sit too close together
4. Technical issue with online testing site hardware

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Changes in Test Irregularities as Percentage of all Test Locations

Percentage of Test Site and Administration Irregularities: 2009-14

■ Increase in reported administration irregularities probably due to increased detection; test site problems decreasing.

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Where Test Site Irregularities Occurred: 2013-14

Number of Test Site Irregularities by Location

■ Test site irregularities show decline across all sites.

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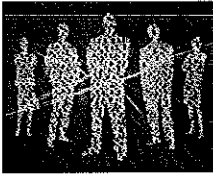
Reasons for Site Irregularities – 2014

1. Candidate registration information was wrong – name or other personal information incorrect
2. Exam material delivery problem – materials did not arrive on time or items were missing
3. Testing in a public or noisy venue (restaurant during dining service)
4. Technical issue with online testing hardware/network

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Goal Four: Reduce Cheating and Test Administration Irregularities

Trend: Confirmed/ Suspected Cheating

■ Trend was up initially, but down last year. Better detection and enforcement today.

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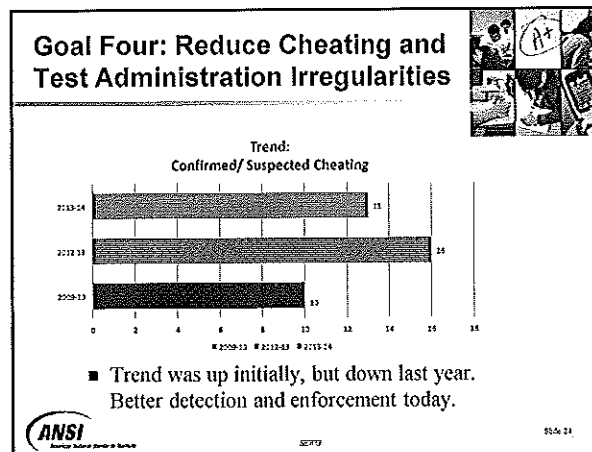
Data Forensics Employed to Combat Cheating

1. Item Analysis (4)*
2. Pass Rate Analysis – compare by group/proctor (2)*
3. Item Difficulty (p-value) Analysis (1)*
4. Point Biserial Correlation (1)*
5. Online exam time Analysis (1)*
6. Incident Response Investigation (3)*

*Numbers in () indicate how many providers report using this.

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Most Frequent Corrective Actions Taken To Combat Cheating

1. Use multiple versions of the exam at each administration (4)*
2. Revoke proctor privileges for collusion (3)*
3. Enforce spacing and other environmental guidelines (2)*
4. Use biometrics to verify examinee identify (1)*
5. Require examinees to retest when cheating is suspected (2)*
6. Adopt better exam forensic analysis methods (1)*
7. Increase exam session audits (1)*

*Numbers in () indicate how many providers report using this.
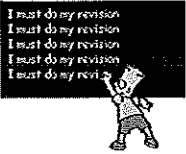
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Test Versions and Revisions

Versions Employed:
- Minimum of 2 versions/administration
- Maximum of 8 versions used
- Avg = 4

Revision Frequency:
- Minimum of yearly
- Maximum of monthly
- Avg = quarterly
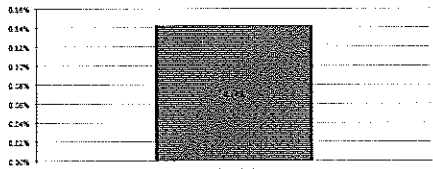
I must do my revision
I must do my revision
I must do my revision
I must do my revision
I must do my revi...

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Test Administration Violations

Violations as Percentage of all Test Administrations

- One out of 1400 test administrations contains a violation, though most are minor.

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Most Frequent Reasons for Test Administration Irregularities
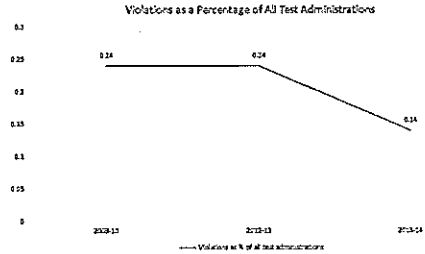
1. Failure to return all test materials on time
2. More exam booklets opened than answer sheets
3. Failure to monitor examinees during entire exam
4. Self-administration of exam
5. Proctor collusion in cheating

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Change in Percentage of Administration Violations: 2009-2014

Violations as a Percentage of All Test Administrations

- Decrease in percent of violations over last year shows progress.

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Goal Five: Improve Test Quality Assurance

- 2009-10: Only 1 of 3 providers had QA system installed and it was incomplete
- 2012-13: All 4 providers had QA system in place, but still implementing some features
- 2013-14: QA system fully functional for all providers

This goals has been achieved by 100% of providers.

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QA System Elements in Place -2014

- Document control (4)*
- Internal audit (3)*
- Management review (4)*
- Exam security plan (1)*
- External audit/certification (1)*

*Numbers in () indicate how many providers report having this in 2013-14.

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Most Frequent Reasons for QA System Breaches

1. Failure to return test materials on time
2. Lost test booklets/completed answer sheets
3. Candidate demographic information missing/incorrect
4. Forensics uncovered possible cheating/collusion

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Provider Perceptions of Test Security Breaches

- "After implementing all the changes [over the past 5 years], our quantity of breaches has dramatically decreased."
- "We are a trusted test development and delivery provider to more than 400 organizations worldwide. On their behalf, we securely deliver an average of 10 million exams per year. We serve as an industry gatekeeper, ensuring that people legitimately earn the credentials they seek to achieve, and thereby guaranteeing a fair testing experience for all who come through our doors."

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Recommendations

- Proctors/Administrators:
  - Increase screening, selection and training standards
  - Continue to vigorously apply disciplinary actions against offenders
- Shipping Irregularities:
  - Use traceable carriers only, especially those with high reputation for security and reliability
  - Continue to enforce rules for shipping

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Recommendations (cont'd)

- Test Sites/Administration:
  - Standardize test site requirements across all providers
  - Share best practices for administration
- Test Cheating:
  - Share best practices for data forensics and cheating detection
  - Encourage test-takers to report cheating (whistleblower hotline)
- QA System:
  - Fully implement all features for all providers
  - Use it as preventive mechanism and early warning system

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Future Steps

FUTURE

- Present findings to key stakeholders
- Identify areas for further improvement
- Fine tune data collection methods as needed
- Include test security evaluation as part of ANSI annual surveillance and monitor trends

Thank you for the opportunity to work with CFP!
Don Ford

ANSI