



**National Science and Technology Council
Committee on Science
Subcommittee on Forensic Science**



Certification/ Accreditation/ Proficiency Tests

Trace Evidence Symposium, 07 August 2009

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IWG-Certification & Accreditation

Why Certification & Accreditation & Proficiency Testing ?

National Academy of Sciences report on “Strengthening Forensic Science in the United States- A Path Forward”

- Certification referenced 128 times**
- Accreditation referenced 162 times**
- Proficiency/Proficiency Tests referenced 88 times**

Do recommendations improve and strengthen these areas and the overall quality assurance of Forensic Sciences? What are the major recommendations?

Summary of NAS Report

“...most disciplines still lack best practices or any coherent structure for the enforcement of operating standards, certification, and accreditation.”

- 1. Congress should establish & appropriate funding for an independent federal entity, National Institute of Forensic Sciences (NIFS)** [Oversight for accreditation and certification]
- 2. Establish standard terminology to be used in reporting on and testifying about forensic science results of investigations** [As part of the accreditation and certification processes, laboratories and forensic scientists should be required to utilize model laboratory reports when summarizing the results of their analyses.]
- 3. Basic research is needed in accuracy, reliability, and validity (particularly pattern evidence)** [Apply the research to certification and accreditation]
4. Remove forensic laboratories from control of law enforcement agencies (Maximize independence)
5. Encourage research programs on observer bias and sources of human error
- 6. Establish standard protocols for forensic examinations, methods, and practices** [A particular need exists for routine, mandatory proficiency testing that emulates a realistic, representative cross section of casework]

Summary of NAS Report

“...most disciplines still lack best practices or any coherent structure for the enforcement of operating standards, certification, and accreditation.”

7. **Oversight-mandatory examiner certification and laboratory accreditation** [No person (public or private) should be allowed to practice in a forensic science discipline or testify as a forensic science professional without certification.]
8. **Establish routine quality assurance and quality control procedures to ensure accuracy**
9. **Establish a national code of ethics with an enforcement mechanism** [Such a code could be enforced through a certification process for forensic scientists.]
10. Develop/improve graduate education programs
11. Improve medicolegal death investigations by replacing coroners with medical examiners
12. Launch a new broad-based effort to achieve nationwide fingerprint data interoperability
13. Prepare for forensic events that affect homeland security - Centers for Disease Control, FBI, local forensic personnel interoperability

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What needs to occur to address the challenges of Certification, Accreditation, and Proficiency Testing in Forensic Sciences?

- What certification programs are currently being offered?
- What accreditation programs exist? Specific to forensics? Do they cover all forensic laboratories?
- What competency and proficiency testing programs are available? Are they standardized?

Who certifies the certifiers, accredits the accreditation agencies, and proofs the proficiency test providers?

Understanding a top-down review of these programs, standards and processes.

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STANDARDIZATION

Certification:

- What are minimum requirements for certification? What is a certification process/test composed of? Who develops these?
- What are the maintenance requirements and continued professional development requirements?
- Does certification become mandatory/condition of employment?

Accreditation:

- What is a forensic laboratory?
- Who is or isn't accredited? Who should be accredited?
- Do existing accreditation standards meet needs?

Proficiency Tests:

- Who develops standards for proficiency testing?
- What does a realistic/cross section of casework proficiency test look like?
- Are blind proficiency tests necessary?

How does universal adoption/compliance occur?

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GAP ANALYSIS

What needs to be modified or added to cover gaps?

- Conduct gap analysis across forensic sciences for C & A & PT
 - What certification organizations and programs are needed to fill identified gaps in certification/licensing?
 - What authoritative bodies exist for approval for certification organization and proficiency test providers?
 - Are there gaps in Accreditation? Forensic specific accreditation? Accreditation bodies? What approaches/solutions are needed, if any?
 - What proficiency tests and providers are available?
 - What proficiency tests and testing are needed?

What proficiency testing and certification overlap is there with education and training?

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COST ANALYSIS

What economic (time, materials and expenditures) impacts occur and recur with certification, accreditation and proficiency testing?

- Is the forensic community willing to invest in forensic personnel capital?
- What are the organizational impacts?
- Are there employee personal costs?

What organizational impacts are there to support potential modifications, new developments and requirements, and potential universal adoption/ compliance/ standardization to strengthen forensic sciences?

Challenges within Trace Evidence

- Trace Evidence examiners and diversity of analysis within our field are unique.
- NAS report references forensic practices as: pattern/experience evidence including hair and impressions (tires, footwear); analytical evidence such as coatings, chemicals, materials (including fibers), fluids, fire/explosive analysis.
- NIJ: trace evidence, fire debris/arson analysis; impression evidence.
- What sub-disciplines and how many?
- What TE certification programs exist? Broad based or specialty: What would be acceptable? Gaps?
- What approved TE proficiency testing programs and sub-discipline samples are available? Gaps?
- Costs to organizations and examiners who perform analysis in multiple areas.
- Scientific workgroups roles? Expand or new SWGs?

What can the newly created American Society of Trace Evidence Examiners (ASTEE) do for this process?

NSTC - Subcommittee on Forensic Science Interagency Working Group



Accreditation & Certification & Proficiency Testing



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Laboratory-Pending Approval

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Thank You