

ISO 17020 is a bad fit for forensic science investigations

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International Symposium on
Forensic Science Error Management
27 July 2017

Outline of the Talk

- *What is ISO 17020 and what concepts and provisions does it provide?
- *What do we want from a standard for forensic science unit operations?
- *Within ISO 17020 what fits, and what doesn't fit for forensic science investigation unit standard?
- *Conclusions

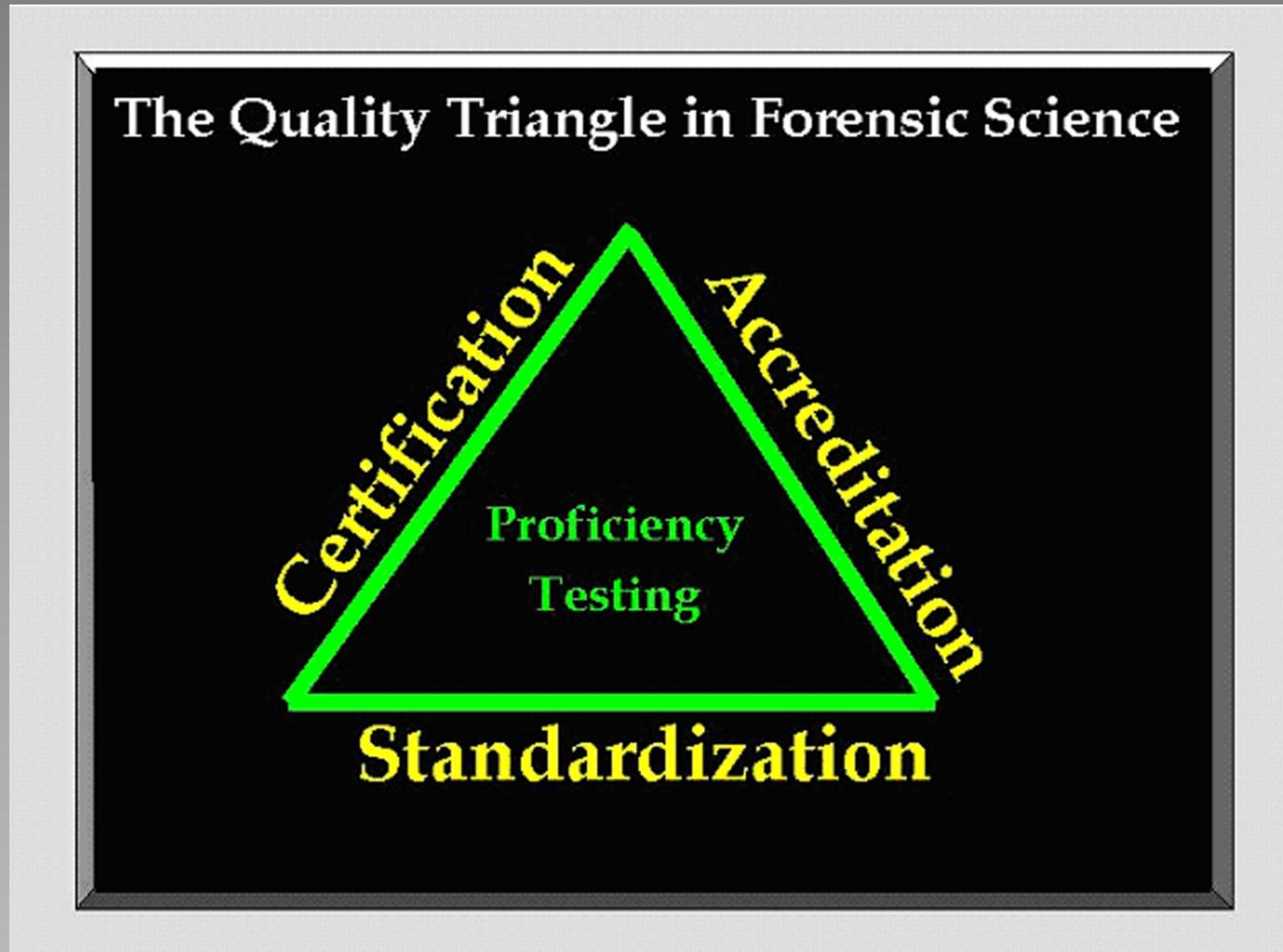
The Need for Forensic Science Investigation Unit Accreditation and Basis Standards

National Academy of Sciences (2009), *Strengthening Forensic Science in the United States-A Path Forward*, called for all forensic practitioners to be certified, to work in accredited organizations, and to follow standard methodology.

National Commission on Forensic Science in April 2015 called for universal accreditation of forensic science service providers.

Accreditation organizations have gravitated toward existing generic standards, ISO 17025 for laboratories and ISO 17020 for investigation units.

Context for Accreditation Standard



What is ISO 17020?

Conformity assessment — Requirements for the operation of various types of bodies performing inspection

- “Inspection: examination of a product, process, service, or installation or their design and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements”
- *examination of a product, process, service*
- *examination of installation or design*
- *determination of its conformity with specific requirements*
- *conformity with general requirements on the basis of) professional judgment)*

But What is Conformity Assessment?

- *ISO/IEC 17000 defines conformity assessment as : demonstration that specified requirements relating to a product, process, system, person, or body are fulfilled.
- *ISO 17020: Inspection bodies carry out assessments ..., with the objective of providing information about the conformity of inspected items with **regulations, standards, specifications, inspection schemes or contracts.**
- *In short, does it meet expectations.

Contents of ISO 17020 (14 pages)

1 Scope	7.2 Handling inspection items and samples
2 Normative references	7.3 Inspection records *
3 Terms and definitions	7.4 Inspection reports and inspection * certificates *
4 General requirements	7.5 Complaints and appeals
4.1 Impartiality and independence *	7.6 Complaints and appeals process
4.2 Confidentiality *	8 Management system requirements *
5 Structural requirements *	8.1 Options *
5.1 Administrative requirements	8.2 Management system documentation * (Option A)
5.2 Organization and management *	8.3 Control of documents (Option A) *
6 Resource requirements *	8.4 Control of records (Option A) *
6.1 Personnel *	8.5 Management review (Option A) *
6.2 Facilities and equipment *	8.6 Internal audits (Option A) *
6.3 Subcontracting *	8.7 Corrective actions (Option A) *
7 Process requirements *	8.8 Preventive actions (Option A) *
7.1 Inspection methods and procedures *	

Reporting Requirements

7.4.2 Any inspection report/certificate shall include all * of the following: *

a) identification of the issuing body; *

b) unique identification and date of issue; *

c) date(s) of inspection; *

d) identification of the item(s) inspected;

e) signature or other indication of approval, by authorized personnel;

f) a statement of conformity where applicable;

g) the inspection results, except where detailed in accordance with 7.4.3.

Optional Reporting Elements

- a) designation of the document, i.e. as an inspection report or an inspection certificate, as appropriate; *
- b) identification of the client; *
- c) description of the inspection work ordered; *
- d) information on what has been omitted from the original scope of work; *
- e) identification or brief description of the inspection method(s) and procedure(s) used, mentioning the * deviations from, additions to or exclusions from the agreed methods and procedures; *
- f) identification of equipment used for measuring/testing; *
- g) where applicable, and if not specified in the inspection method or procedure, reference to or description of * the sampling method and information on where, when, how and by whom the samples were taken; *
- h) information on where the inspection was carried out; *
- i) information on environmental conditions during the inspection, if relevant; *
- j) a statement that the inspection results relate exclusively to the work ordered or the item(s) or the lot * inspected; *
- k) a statement that the inspection report should not be reproduced, except in full; *
- l) the inspector's mark or seal; *
- m) names (or unique identification) of the personnel members who have performed the inspection and, in * cases when secure electronic authentication is not undertaken, their signature (see also 7.4.2) *

What do we want from a standard for forensic science unit operations?

- No preconceptions
- No bias
- Use of the scientific method
- Discipline specific requirements *

Can't We Just Fix 17020 for Forensic Science Investigation Units?

- *Many have suggested that 17020 can be fixed through the use of supplemental requirements
- *Lacks transparency when the principle requirements arise out of supplemental requirements
- *What does it mean to be accredited based upon 17020? Nothing!
- *Removes the credibility from any accreditation process

How Did We Get Here?

- *International Laboratory Accreditation Cooperation (ILAC) recommended the use of a conformity assessment standard in forensic science, going back as far as 2002
- *For the accreditation community, there is little concern for the actual practice being evaluated for accreditation

The Path Forward for Forensic Science Investigation Units

- * **Forensic sciences should create their own standards** \$
- * OSAC Subcommittee on Fire and Explosion Investigation is pursuing development of a standard at the National Fire Protection Association (NFPA)
- * ISO has organized a Forensic Science Technical Committee, ISO/TC 272. Recognize that “ISO17025 and ISO17020 standards are of a generic nature and do not address many of the critical risks unique to forensic science”
- * However, they have a problem: “Standards developed under TC272 are not designed to replace ISO17025 and ISO17020 and can be used complementary to them or stand alone.”