



NATIONAL COMMISSION ON FORENSIC SCIENCE



Recommendation to the Attorney General

Request for NIST to Evaluate Developmental Validation Studies for Forensic Science Test Methods in Advance of Documentary Standards Setting

Subcommittee
Scientific Inquiry and Research
Status
Initial Draft

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Overview

The Commission has developed a views document on the importance of developmental validation for forensic science test methods to establish the methodological limits of these test methods and the need for these developmental validation studies to be performed and documented prior to the creation of documentary standards involving these same test methods.

As the Commission charter provides for the Attorney General to refer to the Director of the National Institute of Standards and Technology (NIST) matters related to priorities for standards development¹, the following recommendations are requested to be referred to NIST.

Recommendations

The National Commission on Forensic Science recommends that the Attorney General refer to the Director of NIST the following recommendations regarding priorities for standards development:

Recommendation #1: NIST should establish an in-house entity with the capacity to evaluate and assess the developmental validation of forensic science test methods.

The 2009 NAS report, “Strengthening Forensic Science in the United States: A Path Forward,” (hereafter, “NAS report”) found “substantial evidence indicating that the level of scientific development and evaluation varies substantially among the forensic science disciplines” and “[a]body of research is required to establish the limits and measures of performance and to address

¹ Justice.gov, “Charter U.S. Department of Justice National Commission on Forensic Science,” section 5, available at <http://www.justice.gov/ncfs/file/624216/download> (last accessed, 01/22/2016).

the impact of sources of variability and potential bias."² Currently, no national scientific entity or organization has been charged with the independent evaluation of developmental validation studies for forensic science test methods. The Commission recommends that NIST establish an infrastructure designed to critically evaluate requisite forensic scientific foundational validation test method data. The Commission recognizes that NIST is a non-regulatory agency and is thus not recommending that NIST's function here will be regulatory in nature.

Recommendation #2: The evaluation of developmental validation of forensic science test methods should be performed by NIST. NIST's evaluation may include, but is not necessarily limited to: research performed by other agencies and laboratories; CSAFE; its own intramural research program; or research studies documented in the scientific literature.³ NIST should complete its evaluation before documentary standards are established and before internal laboratory validation commences.

As noted in a previous presentation before the Commission, NIST has determined that a documentary standard cannot be included in the OSAC Registry of Approved Standards until it first meets "technical merit," which is defined as having detailed scope, fitness for purpose, uncertainty measurement, consideration of potential bias, and method validation.⁴ If a forensic science process does not demonstrate proof of these criteria to the satisfaction of NIST, it does not demonstrate technical merit.

Recommendation #3: NIST, in its role as the administrator of the Organization of Scientific Area Committees for Forensic Science (OSAC), should encourage the governing body of OSAC, the Forensic Science Standards Board (FSSB) to commit to placing consensus documentary standards on the OSAC Registry of Approved Standards for only those forensic science test methods where developmental validation has been evaluated and assessed by NIST.

These recommendations are in line with the OSAC Registry of Approved Standards statement that "the methods it contains have been assessed to be valid"⁵ and are consistent with NIST's mission,⁶ its statutory function,⁷ and its delegated responsibilities in the Memorandum of Understanding⁸

² National Research Council. Strengthening Forensic Science in the United States: A Path Forward. Washington, DC: The National Academies Press, 2009. doi:10.17226/12589, p. 7-8.

³ As defined by the National Commission on Forensic Science views document "Scientific Literature in Support of Forensic Science and Practice" available at <http://www.justice.gov/ncfs/file/786591/download> (last accessed, 01/22/2016).

⁴ Reczek, Karen, "Standards Training & Discussion," National Commission on Forensic Science Meeting 5, Office of Justice Programs, Washington, D.C., January 29, 2015, slide 41, available at http://www.justice.gov/sites/default/files/ncfs/pages/attachments/2015/02/19/day1-nist_standards-training-jan2015-final.pdf, (last accessed, 7/28/2015).

⁵ <http://www.nist.gov/forensics/osac/osac-registries.cfm> (last accessed, 3/1/2016)

⁶ NIST.gov, "Mission, Vision, Core Competencies, and Core Values," available at http://www.nist.gov/public_affairs/mission.cfm (last accessed, 2/11/2016).

⁷ 15 U.S. Code Chapter 7 – National Institute of Standards and Technology, § 272 (b).

⁸ Memorandum of Understanding between the Department of Justice and the National Institute of Standards and Technology in Support of the National Commission on Forensic Science and the Organization of Scientific Area Committees, August 5, 2015, available at <http://www.justice.gov/ncfs/file/761051/download> (last accessed, 1/15/2016). VI. Agency Responsibilities, B. National Institute of Standards and Technology.

Appendix A

Refer to the Views work product on Validation of Forensic Science Methodology developed by the Scientific Inquiry and Research Subcommittee.