A185 21st Century Forensic Education: Surveying Lab Director Entry-Level Examiner Requirements and Attitudes Regarding Educational Standards

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After attending this presentation, attendees will know what laboratory directors reported as their current educational background requirements across a range of forensic disciplines (including QDE, LPE, firearms, toxicology, serology, etc.), and what directors felt were the most important social and legal forces that impacted their standards.

This presentation will impact the forensic science community by providing them with the results of a social scientific survey of entry-level educational requirements (updating research from the 1980s and 1990s) and an analysis of the socio-legal forces that may be impacting those standards.

Over the past twenty years, the field of forensic science has undergone a myriad of technological as well as socio-legal changes. These changes include, but are not limited to, advancements in DNA technology (i.e., RFLP to PCR method, the mapping of the human genome), the construction and maintenance of the Combined DNA Index System (CODIS, 1994) and the Integrated Automated Fingerprint Identification Systems (IAFIS, 1999). As technology has advanced, so has the burden placed on forensic examiners to keep up with innovative procedures, tools, and techniques in the field. This burden is, perhaps, never more acutely apparent than in the courtroom.

Because of these and many other developments, decades-old attitudes regarding the value of advanced degrees in forensic and forensic-related sciences can no longer be expected to accurately describe the level of expected educational attainment for entry-level forensic examiners. This study was designed to update and expand upon the previous survey work by surveying currently practicing lab directors and include additional attitudinal measures that were not presented in the original survey series (see Furton, Hsu, & Cole, 1999; Higgins & Selevaka, 1988; Siegel, 1988; and Lee & Gaensslen, 1988). Through this expansion the authors explored not only *what* educational background forensic lab directors expect or require their applicants to have, but *why* they have developed the standards that they ostensibly enforce. Using traditional survey methodology (Schwarz, Groves, & Schuman, 1998), this study sampled forensic laboratory directors and solicited a variety of responses including indications of the director's own background (i.e., education, work history, etc.), desired educational background for entry- level examiners, amount and kind of prior professional experience, and explored a variety of attitudes toward the forensic sciences.

It was found that overall the coursework and degree requirements have not changed. An emphasis on chemistry across all forensic specialty categories employed in this survey (drug chemist, trace/ impression, serologist/ DNA, firearms examiner, questioned documents, and latent fingerprints) is consistent with the research conducted by Furton, Hsu, and Cole (1999). One notable descriptive difference that appeared is the seemingly increased emphasis on mathematics and statistics. The modal response indicating that Bachelors-level degrees are the dominant degree requirement is also consistent with the previous research, as is the lack of an internship requirement, even when *Daubert* and non-*Daubert* states were compared. The lack of required specialization within the degree background for entry-level examiners in the fields of firearms examination, questioned documents, and latent fingerprint examiners appears to differentiate those practice areas from drug chemist, trace/ impression, and serologist/ DNA analysts. There has been an historic division within the forensic sciences that differentiates between the "hard" and "soft" sciences. The descriptive results regarding areas of specialization suggest that this division is still present. Extending beyond a mere update of previous entry-level education requirements research, the authors found that, in some cases the factors that directors felt influenced the current entry-level educational standards differed according to the *Daubert* vs. non-*Daubert* status of the state as well as the state's caselaw history of judicial evaluation of expert forensic witness educational background.

It has been over fifteen years since *Daubert v. Merrell Dow Pharmaceuticals, Inc.* changed the way that the court interacts with forensic science, and it has been nearly ten years since *Kumho Tire Co., Ltd. v. Carmichael* rounded out the *Daubert* trilogy. Only time will tell if the methodological and technological advances in the field of forensic science or the socio-legal changes that are introduced in the courtroom will fundamentally change the education requirements for entry-level forensic examiners entering the laboratory environment. This survey was a preliminary foray into the potential factors that may be influencing requirements in the forensic laboratory environment.

Director Survey, Education Requirements, Socio-Legal Influences

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