K35 Importance of Peer-Review and Publication for Admission of Expert Testimony in Civil and Criminal Litigation

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After attending this presentation, attendees will learn about the purpose, meaning, and proper use of peer-reviewed literature in specific reference to civil and criminal litigation.

Since the proliferation of scientific admissibility rules, e.g., *Daubert*, there has been a significant weight placed on peer-review. The effective use of peer-reviewed literature in the forensic setting can be abused and misused. A clear understanding of what "peer-reviewed" means as well as its relevant application will impact the forensic community and/or humanity by assisting in the proper use of this element within the scientific and legal arenas.

Much has been written about admissibility of expert testimony in the wake of the U.S. Supreme court decision in the case of *Daubert vs. Merrill Dow Pharmaceuticals.* The so-called *Daubert* principles or criteria for admission of expert testimony have gained wide acceptance not only in many U.S. states but also in other countries where an adversarial system of justice operates (e.g. UK and Australia). One of the *Daubert* principles asks whether a theory or technique has been subjected to peer-review and publication. However, publication should not be the *sine qua non* of admissibility. Publication of research is an integral part of the scientific process and a scientist publishes to spread information to colleagues, to gain credit for the work and to enhance his or her reputation. The vast majority of work published in mainstream scientific journals will never ever be used in civil or criminal litigation. On the other hand, many scientific articles are cited and used daily by both the defense and prosecution attorney to bolster their arguments. But does it really matter where a paper is published? Are some journals more reputable than others? How can scientific journals be compared and contrasted? Can peer-review uncover flawed work and/or plagiarism and thus avoid junk science seeing print? Flawed publications results in flawed expert testimony.

Most would agree that a scientific journal is only as good as its peerreviewers. Peer-review of manuscripts submitted for publication enjoys a 250-year history although the peer-review process has come under attack from several quarters in recent years. Some maintain that the system is outdated and is in urgent need of overhaul. Allegations of bias, nepotism, competing or conflicts of interest have been raised. The advent of webbased journals many of which operate a completely open peer-review system might be something to consider for print-journals. On the web, the entire pre-publication history of an article is available for scrutiny, which is in stark contrast to the traditional "strictly confidential" peer-review reports of paper journals.

With peer-review and publication gaining so such importance in criminal and civil litigation, perhaps the time has come to disclose peerreview reports of manuscripts or make them open to discovery. Most journals operate a single-blind peer-review evaluation with the names of the reviewers not being reveled to the authors of the manuscript. However, some journals request that peer-reviewers now sign their reports and others would like to see the names of these individuals included as an endnote on the published article. Just because an article is published in a peer-review journal does not make the findings or conclusions gospel. What Sir Winston Churchill once said about democracy can be said about peer-review, namely *"it is the worst system in the world but better than all the rest."*

The purpose of expert evidence is to provide the court with information derived from scientific research and studies far removed from the experience, skill and knowledge of a judge and jury. Unlike an ordinary witness who provides factual evidence an expert witness can testify to opinion gleaned from his or her own specialized scientific, technical or medical knowledge. As a result of *Daubert* expert evidence has come under close scrutiny. Some recent high profile cases in UK involving complex and equivocal forensic-medical evidence has led to very serious miscarriages of justice. The backlash from these cases has called into question not only the reliability and admissibility of expert testimony but also the entire adversarial system. The notion of pre-trial hearings and the use of a single joint expert and even jury-free trials might be more appropriate in some cases, especially in civil litigation.

Peer-Review, Publications, Expert Testimony

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