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### **B202 Forensic Pathology as a Forensic Science: What Is “Bias” and Why Does It Matter?**

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After attending this presentation, attendees will understand how forensic pathology — a medical discipline — differs from other forensic specialties and why “history” and “cognitive bias” are not the same thing. The scope of the forensic pathologist’s obligations, which go far beyond simply performing autopsies, requires information from many sources to ensure that decedent identification, cause of death, and manner of death are correct. The breadth of this information, which forms the medical history, is sometimes confused with cognitive bias by those outside the medical profession.

This presentation will impact the forensic science community by providing forensic scientists, attorneys, and cognitive scientists with deeper insight into the practice of forensic pathology, giving them a working knowledge of the concepts of cause and manner of death and the methods by which these conclusions are derived. Forensic scientists will be much better positioned to understand, explain, and defend the practice of forensic pathology.

In 2009, the National Academy of Sciences (NAS) Report, *Strengthening Forensic Science in the United States – A Path Forward* was published. Though largely focused on broad issues spanning many disciplines, it is telling that the NAS assigned medicolegal death investigation its own chapter, not only identifying the challenges unique to this community but also recognizing that the mission of medicolegal death investigation is considerably different than the mission of other forensic disciplines. Many of the deficiencies and needs of the United States death investigation system cited in the report came as little surprise to the death investigation community, as they had appeared in previous reports spanning decades.

Among the forensic disciplines, forensic pathology is (almost) unique because it is the practice of medicine. Its methods are unlike those in other forensic specialties, its goals are different, its scope is often considerably broader, and the types of errors that may occur are unlike those in other forensic disciplines. In all cases falling under medicolegal jurisdiction, the medical examiner is responsible for ensuring the proper identification of the decedent, correctly diagnosing the cause of death, and properly opining on the manner of death. Though these tasks must be done correctly in every instance, the systems in which forensic pathologists perform their duties can run the gamut from ill-equipped offices that are little different from a 19<sup>th</sup>-century coroner to nationally accredited regional or statewide facilities employing board-certified forensic pathologists and state-of-the-art imaging and laboratory equipment.

In practicing their craft, forensic pathologists support many interests beyond the criminal justice system. Indeed, more than 90% of the sudden, unexpected, or suspicious deaths autopsied and certified by forensic pathologists are — at the end of a thorough investigation — found not to be criminal cases. Proper diagnoses and conclusions in these non-criminal cases provide closure for families, serve as powerful drivers for the allocation of public health resources and research dollars, and prevent the needless prosecution of crimes that never occurred.

Some in the jurisprudence and cognitive science communities have raised the specter of cognitive bias in forensic pathology. There is no *a priori* reason that forensic pathologists should be any more or less immune to cognitive biases than any profession. But forensic pathology’s critics sometimes fail to recognize that legitimate medical and contextual history — the foundational basis of the practice of medicine — is not tantamount to inappropriate cognitive bias. Further compounding this misunderstanding is the occasional failure to separate the neutral term “cognitive bias” from pejorative accusations of incompetence, dishonesty, fraud, or corruption.

Manner of death — the medical examiner’s classification as to the circumstances under which the decedent died and highly dependent on a variety of contextual data — is a vital component of death certification and has been a key metric for public health in the United States for more than 100 years. Other uses of the manner of death — in particular, in the courtroom — sometimes pose problems.

The optimal way to ensure quality work and defensible conclusions in forensic pathology, and to minimize bias, is to safeguard the independence of medical examiners through legislative or judicial guarantees. Medical examiners must be independent of law enforcement and prosecutors and available to consult with all parties in the criminal justice system.

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#### **Pathology, Bias, History**