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### **E70 The Forensic Implications of Current Practices in Emergency Services**

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After attending this presentation, attendees will be able to identify the factors leading to the destruction of evidence by fire fighters and Emergency Medical Services (EMS) personnel during an emergency response and how current practices contribute to spoliation.

This presentation will impact the forensic science community by underscoring the incompatibility of current practices in emergency and tactical response with best-practice forensic guidelines for evidence collection, and by discussing practical solutions for scene preservation in unsuitable conditions or an ongoing emergency response. This presentation is also of interest to private-sector investigators who determine responsibility in civil liability cases.

Emergency services professionals and volunteers (local, state, and federal) are required to complete National Incident Management System (NIMS) training developed by the Federal Emergency Management Agency (FEMA) in order to receive government funding. Forensics and attribution fall under the core capabilities of FEMA National Preparedness in that the Department of Homeland Security's strategic goals include forensic analysis to "attribute terrorist acts (including the means and methods of terrorism) to their source"; however, the primary mission of an emergency responder is life-safety. Whether a mass-casualty incident or a rural brush fire, firefighters, paramedics, and other rescue personnel often perform their function with little regard for the subsequent investigation. Arson for the purposes of crime concealment can destroy evidence by fire damage, but also by allowing evidence to be washed away or damaged by water during extinguishment activities. On an active fire scene, multiple emergency responders from a municipality, as well as those from other participating agencies through mutual aid agreements, can be present at any given time. The introduction of trace materials from other locations and biological transfer from various individuals will corrupt the subsequent crime scene, making it difficult to identify meaningful evidence.

The first officer on scene for a non-emergency call has more latitude and opportunity to limit entrance and erect barriers to preserve the crime scene. Conversely, law enforcement has little control in rescue operations performed by emergency personnel. For this reason, private-sector investigators can be prepared with challenging circumstances, arriving on scene sometimes days after an emergency incident has been terminated. Continuing education of firefighters and other emergency responders is the first line of prevention in regard to the destruction of forensic evidence, but a secondary investigator can avoid misinterpretation of evidence at the fire scene by studying the local fire marshal's incident summary, photo-documentation, and investigative report. The fire marshal responds concurrently with emergency services and receives the same dispatch notifications. The fire marshal can provide a first-hand narrative of the incident from the initiation of emergency response to the termination of the incident at headquarters and a science-based fire investigation report.

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#### **Fire Investigation, First Responder, Fire Marshal**