F45 Hospital Emergency Rooms: Please Stop the Blunders and Save the Evidence

Jayne J. Batts, MD, Clinical Forensic Services, 921 Magnolia Avenue, Charlotte, NC 28203*

After attending this presentation, attendees will understand why the Emergency Room (ER) is an unrecognized crime scene and how critical, short-lived evidence which is needed by the judicial system is altered or lost during the provision of patient care.

This presentation will impact the forensic science community by encouraging members of the judicial system to network with their local law enforcement who can in turn work with emergency personnel to develop standardized protocols for evidence collection in the health care setting.

Proper prosecution of a crime begins with the collection of physical evidence performed by crime scene technicians at the initial primary crime scene. Unlike eyewitness statements, physical evidence does not lie.

According to the Federal Bureau of Investigation's (FBI's) Uniform Crime Reporting Program, in 2013 more than one million violent crimes occurred nationwide.[1] The vast majority of these victims survived their injuries and sought medical attention; when they are transported to the ER for treatment, it becomes another "primary" crime scene.

Historically, emergency personnel treat the patient's injuries without consideration of related forensic issues. Due to the lack of training, health care providers often make mistakes in regard to the detection, collection, and packaging of physical evidence which is transported with the victim to the Emergency Department (ED). Smialek noted that, due to a lack of standardized protocols for evidence collection, during the provision of patient care, critical evidence may be lost, discarded, or inadvertently washed away.[2]

During the process of removing the victim's clothing to assess their injuries, the clothing is usually tossed onto the floor and ultimately gets discarded. In cases of victims with gunshot wounds, evidence is frequently lost or altered. Improper packaging of physical evidence induces spoliation. It is common practice to cut through the bullet hole in the clothing when exposing the patient. Alteration of projectiles occur upon removal with metal hemostats and then marking the bullet for identification purposes. These actions significantly decrease the chance a firearms expert will be able to match the bullet with one from the suspect's weapon.

Invasive procedures performed by health care providers may alter wounds or cause injuries to be confused with events occurring during the resuscitation. For example, after President John F. Kennedy was shot, he had a tracheostomy (breathing) tube placed directly through a gunshot wound in the front of his neck which interfered with his postmortem examination. It is also critical to document the characteristics and evidence associated with gunshot wounds before a patient is operated on. Debriding the wound and removing tissue usually renders it impossible to determine if it was an entrance or an exit wound. Moreover, if wounds are not properly documented at the time of injury, they will heal and their appearance will change.[2] It is not uncommon for physicians to incorrectly identify entrance verses exit wounds well over half of the time.[3] Evidence collection in the ER is problematic. In one study, poor, improper, or inadequate documentation occurred in 70% of cases with the potential for criminal or civil actions.[4] In 38 of these cases, potential evidence was either not secured, not documented, or was discarded.

Clinical forensic medicine involves the application of forensic medical techniques to living patients.[5] In the ED, these techniques include the evaluation and documentation of traumatic injuries and the collection of evidentiary material for possible medicolegal use.[5] In the majority of EDs, there are no standardized protocols for evidence collection and preservation. In addition, medical providers do not have the necessary training to understand the need to incorporate these protocols into patient care in cases with forensic implications. As a result, the mistakes made may deny the justice system access to short-lived evidence of critical significance needed in subsequent criminal or civil proceedings. The lack of training in clinical forensic medicine needs to be addressed and health care providers should have standard protocols for evidence collection as well as training much like crime scene technicians receive. If this is achieved, the judicial system will have the additional evidence they may need to successfully adjudicate cases with criminal or civil implications.

*Presenting Author

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