



### H11 The Importance of Dashboard Camera Analysis in Fatal Vehicle-Pedestrian Crash Reconstruction

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**Learning Overview:** After attending this presentation, attendees will be aware of the importance of a comprehensive investigation at the death scene, including the analysis of Digital Video Recorder (DVR) dashboard camera images for the reconstruction of car crashes.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by discussing the risk and the benefits related to the use of a DVR. Indeed, as demonstrated from the reported case, a DVR may be of the utmost importance to protect the driver against the distortion of facts. On the other hand, DVR devices attract negative attitudes for privacy concerns and are not legal in many states.

A DVR is an onboard camera that continuously records the view through a vehicle's front windscreen and sometimes through the rear or other windows. Moreover, some dashboard cameras (i.e., "dashcams") include a camera to record the interior of the car and can automatically send pictures and video. Some more sophisticated DVRs may even allow for recording of other data, such as acceleration/deceleration (g-force), speed, steering angle, and Global Positioning System (GPS) information.

The case of a vehicle-pedestrian fatal crash illustrating the importance of DVR analysis is herein presented. A car rolled many times over the road. The driver was able to climb out of the car and walked toward the street, but was subsequently hit by a Russian articulated lorry (i.e., a tractor-trailer truck.) An autopsy was performed one day later and demonstrated multiple extensive traumatic injuries, including fractures and lacerations of the head with intracranial hemorrhage. There were also traumatic injuries of the thorax, abdomen, and multiple internal organs. Toxicologic analyses were performed on postmortem blood and urine with results positive for 11-Nor-9-Carboxy-Delta-9-Tetrahydrocannabinol (THC-COOH) in urine and negative for all other tested substances (namely, alcohol and common drugs of abuse.) Based on these results, the death was determined to be attributable to the massive cranio-encephalic trauma, and prior cannabis abuse was suspected. The manner of death was initially hypothesized to be an accident based on the absence of previous suicidal attempts/ideation, and scene investigative findings, including the lack of a sidewalk and the very narrow roadside available for pedestrians on the rural road where the collision occurred. Ultimately, however, the analysis of DVR images clearly identified a deliberate rush at the front of the Russian articulated lorry, leading to the certification of the manner of death as suicide.

While dashcams are gaining in popularity as a method of protection against the distortion of facts, they may also attract negative attitudes due to privacy concerns. Different countries have varying laws on the use of dashcams. As a result, in some nations (e.g., Russia) DVRs are very popular and are widely used as medicolegal evidence, while other countries ban or strongly limit their use due to concerns regarding privacy. As illustrated by the case reported herein, additional evidence derived from DVRs may be of the utmost importance in accurately determining the manner of death and preventing a miscarriage of justice.

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**Forensic Pathology, Dashboard Camera, Traffic Accident**