



Pathology/Biology Section - 2016

H95 Recreational Sporting Activity Vehicle-Related Deaths

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After attending this presentation, attendees will: (1) understand the diversity of case types involving vehicle-related deaths that occur during recreational sporting activities; (2) become familiar with some of the risk factors associated with such deaths; and, (3) recognize strategies that may be employed to reduce the risk of such deaths.

This presentation will impact the forensic science community by focusing attention on a somewhat unique yet much-too-common category of accidental death. By examining these cases, the forensic science community can be instrumental in advocating for implementation of preventive strategies, which may reduce the number of deaths resulting from vehicle use in recreational sporting activity settings.

Accidental deaths remain a major public health concern within the United States and elsewhere throughout the world. Unintentional motor vehicle/traffic incidents rank among the top three leading causes of injury-related deaths in all age groups within the United States.¹ A less common subgroup of vehicle-related fatalities occur outside of the setting of typical “traffic” conditions.¹ Another less-common category of death involves sports- and recreation-related deaths. These include deaths related to underlying natural disease and precipitated by exertion, those related to trauma, and those related to an adverse environment.² If one eliminates deaths related to competitive sports from consideration, traumatic sports- and recreation-related deaths in which a vehicle of some type is involved represent a relatively small, but not insignificant, group of diverse case types. For the purposes of this study, a “vehicle” is considered a means of carrying or transporting something, with the “something” representing the participant in the sporting/recreational activity.³ The study excludes flying vehicles and non-mechanical modes of transport, such as horseback. This study examines a series of cases in which death occurred in the setting of a non-competitive recreational sport activity utilizing a mechanical vehicle. The study includes motorized and non-motorized vehicles, land and water vehicles, and summer and winter recreational activities.

The series of cases come from the collective experience of several personnel and includes cases from several different jurisdictions. The series does not include every case that fits the criteria for this study and it is not meant to be all-inclusive. Instead, the cases were purposefully selected in order to provide a sampling of the wide range of case types that exist. Cases presented include deaths related to motorized vehicle use on land in warm weather, including go-carts and All-Terrain Vehicles (ATVs); deaths related to non-motorized vehicle use on land during warm weather, including bicycles; deaths occurring during the use of water-based vehicles during warm weather, such as Personal Watercraft (PWC) and boats; deaths related to motorized vehicle use during winter weather, including snow machines (snowmobiles); and deaths due to non-motorized vehicle use during winter weather, such as sleds and skis. The details of the cases are presented, with special emphasis placed on potentially modifiable risk factors which exist in each case.

Since these cases tend to occur in situations where participants are purposefully attempting to enjoy themselves, often with a history that the activity has been performed numerous times previously without incident, the unanticipated lethal outcome is particularly shocking to witnesses/other participants. As with many accidental traumatic events, deaths related to vehicle use in recreational sporting activities may be related to a variety of risk factors, including but not limited to: the presence of dangerous environment/surroundings; disrepair, inappropriate modification of, or other malfunction of the vehicle; improper use of, failure to use, or ignorance of appropriate safety equipment/devices; operating the vehicle while under the influence of alcohol or drugs; inexperience on the part of the vehicle operator/participant; not using the vehicle in the appropriate manner, including performing dangerous maneuvers and/or exceeding recommended speeds; and the willingness of the participant to engage in reckless, dangerous behavior.

Because of the speed and forces involved in certain land- and water-based, vehicle-related recreational activities, persons who participate in these sporting activities are at-risk for injury and death. By identifying and understanding the factors that contribute to an increased risk for injury and death in these activities, forensic scientists can help to formulate guidelines for safer participation. When abiding by safety precautions and suggested guidelines for appropriate participation, persons engaging in land- and water-based recreational sporting activities that involve the use of vehicles will be better able to prevent catastrophic injury and death.



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Reference(s):

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 3. Merriam-Webster. <http://www.merriam-webster.com/dictionary/vehicle>. Accessed 7/15/15
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