



Pathology/Biology Section - 2016

H44 A Nine-Year Review of All-Terrain Vehicle-Related Fatalities at the West Tennessee Regional Forensic Center: 2006–2014

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The goal of this presentation is to present the epidemiology of All-Terrain Vehicle (ATV) -related fatalities reported to the West Tennessee Regional Forensic Center from 2006 through 2014.

This presentation will impact the forensic science community by describing the epidemiology of 35 ATV-related fatalities in order to assist local and state authorities in implementing preventative measures for ATV use.

According to the Consumer Product Safety Commission, more than 12,000 ATV-related fatalities have been reported in the United States between 1982 and 2012. The state of Tennessee, when compared with the other 49 states, accounted for the 7th highest number of reported ATV-related fatalities during this period. The primary purpose of this study was to present a retrospective review of ATV-related fatalities reported to the West Tennessee Regional Forensic Center (WTRFC) over a nine-year period from 2006 through 2014.

There were 35 cases of ATV-related fatalities reported to the WTRFC during this nine-year period. The yearly distribution of these 35 deaths ranged from no deaths in 2007 to eight deaths in 2010 (an average of 3.9 deaths/year). A majority of these fatalities were male (80.0%) and White (74.3%). The average age was 35.8 years (age range 1y-79y). The ATV accidents resulting in these fatalities occurred in Tennessee (20), Mississippi (9), Arkansas (5), and Missouri (1). Most of the accidents occurred on a roadway (60.0%), on the weekend (65.7%), and were roll-over accidents (42.9%). The decedent was the driver of the ATV in most cases (62.9%). In the majority of cases, 88.6% (31 of 35), the decedent was transported to a local or regional health care facility where they later died. In the other four cases, the decedent died at the scene of the accident. Injuries related to blunt force trauma were the primary cause of death in most cases (94.3%) while drowning was the cause of death in the other cases (5.7%). In 16 of the 35 cases (51.4%), toxicology was performed and the results were available for review. In 77.8% of these cases, toxicology detected some level of alcohol, common drugs of abuse, and/or selected medications. Although it was unknown if the decedent was wearing a helmet in most cases (21 of the 35 cases), where information was available, none of the 14 decedents were wearing a helmet.

All-Terrain Vehicle, West Tennessee, Fatalities