G49 Adolescent and Young Adult Suicide: A Ten-Year Retrospective Review of Kentucky Medical Examiner Cases

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The goal of this presentation is to present a comprehensive review of findings gleaned from postmortem examinations on suicide victims between the ages of 11 and 24 in Kentucky between 1993 and 2002, and to offer strategies aimed at the prevention of adolescent and young adult suicide.

This presentation will impact the forensic community and/or humanity by showing how adolescence represents a tumultuous period in a young individual's life as the youth strives to gain independence and flourish into a productive member of society. This period of transformation is often associated with anxiety and stress, encouraging feelings of hopelessness, personal failure, and suicidal ideation. The prevalence of youth suicide by firearm necessitates restricting unsupervised household access to firearms and identifying adolescents and young adults who are at risk for suicide.

According to the *National Vital Statistics Report* in 2001, suicide, as a manner of death, ranked as the third leading cause of death in the United States between the ages of 15 and 24 and accounted for 3,971 deaths. The rate of completed suicide in this age group has tripled since 1950. The estimated ratio of attempted suicides to completed suicides for adolescents is 200:1, which is significantly higher than that of the general population, with an estimated 10-25 attempts for every completed suicide. A host of biopsychosocial factors contribute to adolescent suicidal behavior. The majority of adolescent suicide victims suffer from either single or combined psychiatric disorders, including affective and personality disorders, substance abuse, anxiety or conduct disorders, eating disorders, and aggressive and antisocial tendencies. Youths often display risk-taking behaviors, including reckless motor vehicular operation, running away from home, auto theft, gun carrying, lack of seatbelt use, assault, and truancy. A lack of a cohesive family unit may provoke suicidal ideation; specifically, poor parent-child communication, parental violence, and loss of a primary caregiver. Suicide clusters are most commonly associated with youths ages 15 to 24, precipitated by either experiencing the suicide of a member of a young individual's peer group or gaining media exposure and imitating suicidal behavior.

This study presents 466 medical examiner cases of suicide ages 11 to 24 in Kentucky between 1993-2002, with 108 victims ages 11 to 17 and 358 victims ages 18 to 24. The majority of victims in both age groups were males (88.9% and 87.4%) and Caucasian (88% and 90.8%). A paucity of black females committed suicide, consisting of only 0.92% and 0.84% of victims in each group, respectively. The leading causes of death were the same for the two age groups, specifically, firearm injury (72.2% and 70.7%), hanging (22.2% and 18.7%), and drug intoxication (2.8% and 5.3%). The head was the most likely target of the firearm wound for both males and females, accounting for 93.6% and 85% of victims in each age group, respectively. Suicide peaked in September for group ages 11-17, most likely reflecting the tension associated with the initiation of a new school year. The highest percentage of cases for the group ages 18-24 was documented in January. Ten (9.2%) subjects ages 11-17 had previously attempted suicide, in most cases, by incised wounds of the upper extremities; 60% of these victims fatally succumbed to a cranial firearm wound. Of the 35 (9.8%) victims ages 18-24 who had previously attempted suicide, 48.6% died as a result of a firearm injury to the head and 31.4% selected hanging.

Toxicological studies constitute an important component in the investigation of a suicide. In the suicide group ages 11 to 17, blood and urine were collected in 93.5% and 72.2% of cases, respectively. Approximately 62% of victims in this group had negative blood toxicology, and 71.2% of urine toxicology screens yielded no drugs. The blood alcohol concentration (BAC) was negative in 83.2% of cases, while 7.9% had a BAC ? 0.1 mg%, and 8.9% < 0.1 mg%. A minority of victims had been prescribed psychoactive medications as discerned in the blood, specifically, benzodiazepines in 4.9% and antidepressants in 3.9%. Cannabinoids were detected by urine screen in 23.1% of the decedents. Of the victims ages 18 to 24, blood and urine were collected in 92.4% and 71.8% subjects, respectively. The blood toxicological results were negative in 40.3% of cases. The BAC was negative in 59.2% of cases, ? 0.1 mg% in 26.9%, and < 0.1 mg% in 13.9%. The following prescription psychoactive medications were quantitated in the blood: benzodiazepines (8.4%), opiates (6%), and antidepressants (5.1%). Urine screen revealed cannabinoids in 31.5% and cocaine in 8.2%.

This comprehensive analysis incorporates a myriad of factors that may have contributed to suicidal behavior, specifically, psychiatric illness, domestic turmoil, employment unrest, and legal difficulties.

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Suicide, Adolescent, Firearm

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