



## Pathology Biology Section – 2007

### G50 A Retrospective Review of Youth Suicide in New Mexico

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The goal of this presentation is to provide a brief overview of youth suicide in the United States; discuss one model of suicide and suicidal behavior; provide an overview of youth suicide in New Mexico including demographics, decedent characteristics, and circumstances of death; and discuss possible interventions to prevent youth suicide, based on the New Mexico experience.

This large-scale study on suicide in children and adolescents will impact the forensic community and/or humanity by demonstrating increasing understanding of this large (and growing) public health problem. With a solid understanding of the circumstances surrounding youth suicide, it may be possible to predict, and hopefully prevent, future cases of child and adolescent death.

**Introduction:** Although a suicidal behavior in children and adolescents is a major public health problem, large-scale research on suicide in this population is uncommon. Analysis of the methods and risk factors over time may permit more focused planning for suicide prevention programs.

**Methods:** All pediatric suicide cases referred to the New Mexico Office of the Medical Investigator from 1979 to 2005 were reviewed. For the purpose of this study, pediatric deaths were defined as deaths in the age group of one day up to and including 17 years of age. The autopsy, field investigator, and police reports were examined in detail regarding age, sex, location, and method of suicide; presence of suicide notes; and any contributing psychologic factors or stressors.

**Results:** There were 433 pediatric suicides during the study period, ranging in age from nine to 17; the age-adjusted suicide rate was 4.8 per 100,000 with a male-female ratio of 3.8:1. There was no significant change in gender, race, or age over time; however, there was a significant increase in the number of suicides per year. Greater numbers of suicides were observed during the months of December and February as compared to other months. Psychologic stressors were identified in some cases, such as psychiatric problems (46%) and chronic family problems including physical or sexual abuse (32%). There was a history of previous suicide attempt or suicidal ideation in 28% of the cases. Most of the suicides (76%) occurred in the victim's home or yard, and 25% left a suicide note. In 26% of cases alcohol or other drugs were detected postmortem; toxicology testing was more often positive in decedents over the age of 15 and only rarely positive in decedents younger than 15. Gunshot wound was the most common method overall (58%), followed by hanging (30%), overdose (5%), and other (including drowning, jumping from height, and blunt force vehicular trauma, 5%). Of note, hanging deaths were significantly more common among Native Americans as well as those decedents younger than 13. In addition, there has been a statistically significant decrease in deaths by firearm and a concurrent significant increase in hanging deaths.

**Conclusions:** Although the age-adjusted suicide rate is markedly higher in New Mexico than nationally, the trends in the regional population are similar to those seen nationally. The authors therefore present their findings in this 26-year retrospective study to increase understanding of pediatric suicides. With a solid understanding of the circumstances, it may be possible to predict, and hopefully prevent, future cases of child and adolescent death.

**Adolescent, Death, Suicide**