



H39 Suicides Among the Young: A Ten-Year (2007–2017) Retrospective Analysis of Suicides Under the Age of 18 in Metro Detroit

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Learning Overview: After attending this presentation, attendees will understand the growing trends of suicide-related deaths within adolescence during a ten-year period in the Wayne County Medical Examiner's Office, and how they correlate with those found at the national level.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by discussing child suicide prevention and the need for increased therapy and follow-up, as evidenced by child suicide data reviewed by the Wayne County Medical Examiner's Office.

The United States has seen suicide rates steadily increase within the past 30 years, with suicide currently being the tenth-leading cause of death nationally and the second cause of death among youths 10-17 years of age.^{1,2} To assess Michigan trends in suicidal youth, the Wayne County Medical Examiner's Office conducted a retrospective study of suicides in the Metro Detroit area from 2007 to 2011, and again from 2012 to 2017.

A total of 2,513 suicide cases were reported for all age groups between the years 2007 and 2017, of which 103 suicides fell within the 0-17 age group, comprising 4% of the total number of suicides. The number of suicides in youths, ages 0-17 years, has increased by 39.5% in the last 5 years in comparison with the previous 5 years. The data gathered for the two comparison periods observed the highest numbers of suicide taking place between 16 to 17 years of age and recorded the youngest suicide at the age of 7 years ($n=1$).

In addition to age, data was collected for gender, suicidal method, reported bullying, medical conditions, indication of previous suicide attempts, the type of note left, and toxicology findings for the two five-year periods. The rate of suicide is 3.5 times more prevalent in males than females; 70% of suicides are attributed to males and 30% to females in the overall gender distribution. A comparison between 2007–2011 and 2012–2017 in suicide by gender also attributed a higher number to males in both groups, with a 20% increase in the last five-year period.

The number of suicide deaths by method was compared to national trends and, contrary to national data where firearms hold the place for leading suicide method over suffocation/hanging and drugs for all age groups, at Wayne County, hanging was the chosen method for the 2007–2017 period with 66% of attributed deaths, followed by firearms with 21%, drugs with 7%, multiple injuries with 5%, and drowning with 1%.³ Though deaths attributed to firearms increased from 16% to 25% in the past five years, the method of hanging, though decreased from 72% in 2007–2011 to 61% in 2012–2017, is still leading the suicide death by method of choice.

Bullying is a multifaceted developmental issue that stems from issues forming or holding relationships that manifest into aggression in peak ages of 9-15 and increase the likelihood of self-inflicted harm in those that participate in or are victims of bullying.^{4,5} This study found that the second-largest age distribution occurred in ages 13-15 ($n=42$), which aligns itself with the idea that bullying may predispose children to self-harm.⁶

The number of prior suicide attempts increased from 19% in 2007–2011 to 27% in 2012–2017. Of the 103 suicide cases recorded, 23% ($n=24$) presented with at least one prior attempt, and 23 of the 24 cases reported decedents suffering from depression at the time of demise.

Twenty-five percent of the suicide victims of this study left a suicide note behind, either paper-based, verbal, or in social media. The type of note left changed over the years, particularly the increase in social media notes, from non-existent in 2007–2011 to 8% in 2012–2017.

This study highlights the veer from the national trends in suicide deaths by methods and recognizes new developments that merit mention and for which further research is recommended: the impact bullying has on increasing suicides in youths, the number of prior suicide attempts, and the type of suicide notes left behind.

Reference(s):

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3. Center for Disease Control and Prevention. 2018. *Suicide rising across the U.S.* Privacy & Terms. Last modified June 11, 2018. <https://www.cdc.gov/vitalsigns/suicide/index.html>.
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5. Luxton, David D., Jennifer D. June, and Jonathan M. Fairall. 2012. Social Media and Suicide: A Public Health Perspective. *American Journal of Public Health* 102 S2): S195-S200.
6. National Institute of Mental Health. 2018. *Suicide*. Last updated May, 2018. <https://www.nimh.nih.gov/health/statistics/suicide.shtml>.

Suicide, Young, Bullying