Every year in Orange County about 2,700 residents intentionally harm themselves seriously enough to require medical treatment and 261 successfully end their lives by committing suicide. Such intentional self-harm is a serious public health problem that has a devastating impact on those affected, including family, friends, and the community. In addition to the social costs, the economic costs of medical/psychiatric treatment for self-inflicted injuries are about $50 million dollars per year. To better identify those at risk and prevent such needless tragedies, this study examined emergency department (ED) and hospital patient discharge records (PD) to characterize self-inflicted injuries. The circumstances concerning suicides were analyzed in the county mortality data for the years 2005-2007.

**KEY FINDINGS OF THE STUDY**

From January 2005 through December 2007, 8,126 county residents were treated in the emergency department as a result of a self-inflicted injury. About 40% were subsequently hospitalized (n=3,278). Most all (98.8%) of these cases were non-fatal.

**SELF-INFlicted INJURY**

Six out of ten people who intentionally harmed themselves were female. On average, 1,672 females and 1,037 males per year were treated in the ED annually. Females 10-24 years of age were the most likely to intentionally hurt themselves (avg=724/yr); accounting for nearly half (42%) of all ED/PD cases.

For each gender, the age group with the highest number of self-inflicted injury cases were young adults 18-24 years. The number of cases systematically declined with age for both genders.

The majority (67%) of self-inflicted injuries were due to poisoning by a solid or liquid substance (i.e., overdose). The second most common mechanism of self-harm was the use of a cutting/piercing instrument (22%). Hanging/strangulation (2%), firearms (0.7%), and jumping from a high place (1%) were utilized less frequently in such injury cases.

At least 75% of the victims treated in the ED/PD had a known mental illness (e.g., schizophrenia or mood disorders) and/or a substance use problem; two key risk factors for self-inflicted injury and suicide.

ED/PD treatment costs in Orange County are estimated to be at least $45 million/year and psychiatric hospitalizations $5 million/year.

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SUICIDE DEATHS
On average, 261 people ended their lives each year - a total of 781 residents from 2005-2007. While females were more likely to intentionally injure themselves, males were almost three times more likely to successfully commit suicide - accounting for 74% of all suicides. Middle-aged males, 45-54 years accounted for the highest number of suicides each year (avg=42/yr). For females, 45-54 year olds also had the highest average number of suicides per year (avg=19/yr).

The external cause (or mechanism) of self-inflicted injury resulting in death was most often through the use of firearms (n=265 of 781 suicides; 34%). Males were more likely to use such violent methods. Similarly, the second most commonly used mechanism was by hanging, strangulation and suffocation (26% of all suicides). Again, males accounted for three-quarters of such incidents.

By comparison, females preferred less violent means; they were more likely to end their life through the use of poisoning by solid/liquid substance (i.e., overdose). Poisoning was the third most common mechanism overall (20%) and more females (avg=28.3/yr) than males (avg=25/yr) utilized this method.

GEOGRAPHIC DISTRIBUTION OF SUICIDE DEATHS
A geographic analysis of the ZIP code of residence of all suicide deaths in Orange County for 2005-2007 showed a higher rate of suicide deaths in coastal cities such as San Clemente, Laguna Beach, Newport Beach, Huntington Beach, and Seal Beach.

A major goal of the Prevention & Early Intervention Program is to reduce such suffering and loss of life in Orange County. Through early identification and intervention for at-risk suicidal behavior, the aim is to prevent the mental health problems that can lead to self-harm and suicide.