Suicide ranks as the 2nd leading cause of death in adolescents and teens and 10th among all cause deaths in the U.S., with nearly 43,000 people dying annually. Considerable age, gender and racial/ethnic disparities exist with regard to its relative age-specific rank among all cause deaths.

Suicide rates have risen nearly 25% over the last 15 years. It is currently the second leading cause of death overall in the ages categories of 10-34 years and in every 5 year category: 10-14, 15-19, 20-24, 25-29 and 30-34 years. For males and females, aged 10-74 years, U.S. suicide rates rose from 10.5 to 13.0/100,000 population between 1999 and 2014. Rate increases were highest among those aged 10 to 24.

Firearms continue to be the means used in about half of all suicides, with firearms accounting for the vast proportion of suicides in males across all ages categories. Poisoning is the most common method.

(Continued on page 4)
ADDITION, UNINTENTIONAL OVERDOSE AND SUICIDE RISK

One-third of people who have died from opioid overdose in recent years were nonmedical users of prescription opioids. One-third of people who have died from opioid overdose in recent years were nonmedical users of prescription opioids. The precise epidemiological relationship between opioid abuse and suicide remains unclear. Some fatal overdoses are unintentional; some are conscious acts of suicide; and some opioid abusers commit suicide through other means. Many intentional and unintentional overdoses may also be misclassified or of undetermined intent. 6 Both opioid abuse and suicide disproportionately affect males, females comprise 56% of all suicidal behaviors — ideation with plan, intent and attempt, while males comprise 73% of suicide completions.

It is reported that a comprehensive suicide prevention program using local epidemiological data has identified firearms as a risk factor in two thirds of the region’s suicides. A program of safe firearm storage was developed.

Rigorous surveillance coupled with strong evaluation of culturally suitable intervention programs aim to address the racial disparities that persist in suicide rates in American Indian/Alaskan Native communities. Limitations of epidemiological methods, specifically small sample size and power, have proved to be obstacles.

While some studies have reported age and gender adjusted American Indian/Alaskan Native suicide rates that are only slightly higher than the reported all races age and gender-adjusted suicide rate, studies comparing self-reported racial classification to racial classification on death certificates found a 30% underreporting rate among American Indian/Alaskan Natives. While aiming to find large effect sizes is important in epidemiological research, this can have the unintended consequence of ignoring issues affecting smaller communities. Suicides and other public health concerns within

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EFFECTIVE SUICIDE PREVENTION APPROACHES INDICATED FOR AMERICAN INDIAN/ ALASKA NATIVES

Suicide means varies across race/ethnicity and gender. The suicide rate for American Indian/Alaskan Native males aged 15-24 is 2.1 times higher than that of other similarly-aged males. Among the 12 Indian Health Service (IHS) areas, Alaska and Tucson tended to have the highest American Indian/Alaskan Native suicide mortality rates, 38.5 and 23.1/100,000, respectively.

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(Continued on page 5)
Veterans and suicide: Twenty per day, mostly by firearms

Veterans groups are lauding a recent report from the U.S. Department of Veterans Affairs as a critical step in highlighting a significant need among veterans. According to the report, only 6.8% of the population accounted for nearly 20% of all suicides in the U.S. despite veterans being only 8.5% of the population. Veterans groups are lauding a recent report from the U.S. Department of Veterans Affairs as a critical step in highlighting a significant need among veterans. According to the report, only 6.8% of the population accounted for nearly 20% of all suicides in the U.S. despite veterans being only 8.5% of the population. Most suicides among veterans are by firearm, with roughly one third of deaths among civilians being by firearm. Overall, veteran suicide has widened. Two thirds of the 2014 veteran suicides were by firearm, a particularly lethal means.

In 2014, 20 veterans committed suicide every day—comprising 18% of all suicides nationally.

Increased suicide attempts in military dependents compared to similarly aged non-military adolescents and teens

Attempted suicide in U.S. military dependents is reportedly nearly double that of similarly aged, insured non-military dependents with rates of 23.1/1,000 injury-related hospitalizations compared to 12.2/1,000 in non-military dependents. While the psychosocial effects of parental military deployment have been studied and documented including lower school performance; increased sleep difficulties; behavioral difficulties such as acting out, aggression, displays of uncontrolled anger and an increase in mental health conditions such as anxiety, the relationship and links to suicide attempts in military dependents need further study.

Less well understood are risk factors related to suicides and types of parental deployment, social support and preventive measures that might mitigate or lessen attempted and completed suicides in this population.

Suicide attempts in military adolescents and teens are twice that of non-military dependents

In 2014, the Pentagon’s Defense Suicide Prevention Office submitted a report to Congress detailing a proposal for further tracking of suicide related deaths. The National Center for Health Statistics data on U.S. suicide could be compiled and compared with Defense Department data on military family members enrolled in an ID card program. The duration for completion of the endeavor was estimated at 18-24 months at a cost of $1.2M. Stigma is one obstacle cited to gathering additional epidemiologic data on attempted and completed suicides in military dependents that might be used to support community or school-based intervention efforts.

While the Army maintains a system for tracking data on suicide among family members, and it is on the radar of at least one other military branch, a mechanism to assure that “this information” will not be used to deny promotions and advancement of the enlisted parents is needed to ensure the uptake of the program.

Additional work is needed to develop and evaluate effective interventions aimed at addressing this disparity between military and nonmilitary adolescents and teens.

References:
Suicide in the U.S.: Trends, Means and Disparities

(Continued from page 1)

in white women, with suffocation being a more commonly used method in Latino, Asian and American Indian/Alaska Native women.

While male suicide rates exceed female rates across all ages, rising female rates are narrowing this gap. Between 1999 and 2014, the ratio of male to female suicide rates changed from 4.5 to 3.6.

American Indian/Alaska Natives and Whites have the highest male and female suicide rates until age 65. Male suicide rates were consistently lowest among Hispanics, Asians, and Blacks to age 65. Hispanic and Black females tended to exhibit the lowest rates. There are reported disparities in the recognition of suicide risks as well as access to and reimbursement for mental health professionals once risks have been identified.

(Based on 2015 CDC “Facts at a Glance” and WISQARS data)

Suicide ranks as the 2nd leading cause of death in adolescents and teens and 10th among all cause deaths in the U.S.

![Age Specific Suicide Rates in Males by Race And Ethnicity (WISQARS 2010-2014)](image1)

![Age Specific Suicide Rates in Females by Race and Ethnicity (WISQARS 2010-2014)](image2)

Addiction, Unintentional Overdose and Suicide Risk

(Continued from page 2)

with men committing suicide at approximately four times the rate of women. Men too are more likely not only to abuse opiates, but also for their opiate use to require emergency room visits or to end in overdose death. 

Understanding which opioid drug users are at risk for either suicide or accidental overdose is critical to offering appropriate interventions. While those at risk for suicide require appropriate mental health care to address underlying conditions, those at risk for unintentional overdose also need to be offered harm and risk reduction strategies. 

It is critical that policies designed to address opiate abuse through limiting access also include features to treat those addicted and monitor substitution effects that may be equally or more fatal.

References:
THE MEANS MATTER CAMPAIGN
(Continued from page 1)

In the early 2000’s in Israel, 90% of the suicides in the Israeli Defense Force were by firearm, many during weekend leaves. Beginning in 2006, soldiers were required to leave weapons on base during leave. The overall suicide rate fell 40%, driven by the drop in weekend suicides, while weekday suicide rates remained constant.

In the U.S. today, firearms account for only 1% of all suicide attempts but for approximately 50% of suicide deaths. Dr. Hemenway notes that guns are accessible in the U.S., highly lethal, fast and irreversible. Individuals in “high gun” vs. “low gun” states were almost twice as likely to have a completed suicide. The difference in prevalence of suicide by firearm (63% vs. 28%) accounts for this difference; numbers of suicides by other methods were roughly the same between high and low gun states, while suicide attempts were actually 19% higher in the low (HI, NJ, MA, RI, CT, NY) compared to high gun states (LA, UT, OK, IA, TN, KY, AL, MS, ID, ND, WV, AR, AK, SD, MO, WY).

This data holds clues for prevention: Expanding firearm safety efforts in gun owning communities to include suicide prevention may reduce overall suicide rates.

There is a growing movement to engage gun retail shops in suicide prevention. The New Hampshire Gun Shop Project is a coalition of gun retailers, suicide prevention advocates and gun rights activists. The shop developed suicide prevention materials for distribution through gun shops. Additional efforts are underway to develop relationships between those in the field of injury prevention, mental health and those in firearm instruction to disseminate an educational module on suicide prevention in the New England states.

Physicians also have a role to play: By speaking to at-risk patients in crisis and their families about gun safety, such as suggesting the storage of one’s gun with a friend or in a safety deposit box so that it is not accessible during a crisis, more suicide deaths might be averted. Barber and Hemenway suggest that the emphasis should not be on questioning a patient about whether s/he owns a gun, but rather on providing useful information in the event that s/he does.

Public education efforts on this front are increasing as suicide prevention advocates attempt to identify and reach at-risk persons outside the health care system. For more information on the Means Matter Campaign, go to: http://www.hsph.harvard.edu/means-matter/

“Firearms account for only 1% of all suicide attempts but for half of suicide deaths”

EFFECTIVE SUICIDE PREVENTION APPROACHES INDICATED FOR AMERICAN INDIAN/ALASKA NATIVES
(Continued from page 2)

American Indian/Alaskan Native nations and communities are among such issues.

References:
http://www.cdc.gov/nchs/data/hestat/suicide/rates_1999_2014.htm#Fig2

Great Lakes Inter-Tribal Council, Inc. Suicidal Behavior Among American Indian/Alaska Native Populations: Indian Health Service Resource Patient Management System Suicide Reporting Form Aggregate Database Analysis, 2003-2012 funded by the Indian Health Service, Division of Behavioral Health, Lac du Flambeau, WI Great Lakes Inter-Tribal Epidemiology Center, Great Lakes Inter-Tribal Council, Inc.; 2013.

Studies comparing self-reported racial classification to racial classification on death certificates found 30% underreporting among American Indian/Alaskan Natives
**Chronic Traumatic Encephalopathy**

The connection between Chronic Traumatic Encephalopathy (CTE), a potential consequence of traumatic brain injury, and suicide has received much attention following the suicides of multiple NFL players and U.S. war veterans from Iraq and Afghanistan.

Researchers at Boston University and the Department Veterans Affairs have identified CTE in 131 of 165 individuals whose brain tissue they have examined who had played football either professionally, semi-professionally, in college or in high school. CTE was identified in 96% of the NFL football players and in 79% of football players more generally.

Those who have donated their brains for testing tend to be families of or those who suspected they had CTE while living, potentially giving researchers a skewed sample. Nonetheless, researchers indicate that their recent numbers are very consistent with past research on the link between football and traumatic brain injury.

The disease can be difficult to pinpoint as onset often occurs several years after brain injury and, while brain scans have been used to identify the signs of CTE in living players, autopsy is still considered the gold standard for diagnosis.

It is thought that the development of CTE is linked more closely to repeatedly minor injuries rather than to comparatively few severe ones. Symptoms include memory as well as concentration and attention problems, aggressive tendencies, as well as several symptoms which led to increased suicide—mood swings, impulsivity and depression.

The NFL has publicly stated that it is dedicated to improving the safety of football and taking "steps to protect players, including rule changes, use of technology for detection, and expanded medical resources." The league has also revised safety rules in an effort to minimize head-to-head hits and made contributions to the research at Boston University, the NIH, and other related organizations.

The numbers of suicides linked to CTE and their high profile nature are catalyzing a larger body of research with more methodological rigor.

References:
- [http://www.pbs.org/wgbh/frontline/article/new-alicegwalton/2012/12/05/the](http://www.pbs.org/wgbh/frontline/article/new-alicegwalton/2012/12/05/the)

**History of child abuse is linked to increased suicide risk in adults**

Based on data from the 2001-2003 National Comorbidity Survey Replication, the adult twelve-month prevalence of post-traumatic stress disorder (PTSD) is 1.8% among men and 5.2% among women. However, the prevalence among high-risk subgroups is much higher. A 2008 study estimated the current prevalence of PTSD to be 13.8% among veterans deployed in Operation Enduring Freedom and Operation Iraqi Freedom (Afghanistan and Iraq).¹

A systematic review of the relationship between PTSD and completed suicide examined 22 studies of attempted suicide and noted an increased risk of attempted suicide among those with PTSD.² A study published last year using data from the National Epidemiologic Survey of Alcohol and Related Conditions found that the risk of suicide attempt differs depending on the number and types of trauma experienced. Increased suicide attempts ranging from a 28%-37% increases have been reported for those attacked, beaten or injured by a caregiver as a young minor; sexually assaulted, molested, or raped. In contrast, only 0.9% of those with no history of trauma reported having attempted suicide. In addition, the rate of suicide attempt was found to be a function of the number of separate traumas; 3.3% of subjects with one or two traumas reported having made a suicide attempt, compared with 36.9% of subjects who experienced ten or more traumatic events.³

Mental health professionals and injury prevention advocates are working to address and elucidate the relationship between PTSD and suicide, the role of comorbid psychiatric disorders as well as personality traits and pre-trauma psychiatric states.⁴

References:
College campuses have traditionally struggled with suicide prevention efforts as the majority of students who commit suicide do so without having come to the attention of the campus mental health services.

**Counselors developed the “Tech Ends Suicide Together” campaign after hearing a report on NPR last fall about the Zero Suicide initiative**

Georgia Tech is now addressing this issue with its newly introduced “Tech Ends Suicide Together” campaign, which aims to eliminate suicide on its campus. The school has reported lower rates of suicide, one per year on average, than the national average for schools of its size, but the school has taken the stance that even one suicide is too many.

The “Tech Ends Suicide Together” campaign derives from an international initiative, the Zero Suicide initiative, that has been implemented previously in healthcare settings. Lacy Currie, coordinator of the suicide prevention and crisis response program in the school’s counseling center, and Toti Perez, director of the counseling center, began discussing what developed into the “Tech Ends Suicide Together” campaign after hearing a report on NPR last fall about the Zero Suicide initiative. While Currie notes that suicide prevention work has typically been “a lonely effort, with the responsibility falling mostly on mental health professionals,” this campaign looks to engage the Georgia Tech community very broadly in prevention efforts, in all departments from housing to athletics. Bringing prevention efforts beyond traditional mental health services to identify at risk individuals may be a critical step in prevention.

Currie notes that statistically most students who commit suicide have not come to the attention of college counseling centers, “so if we’re sitting in the counseling center, waiting for those students to come to us, we’re in big trouble.”

Dr. Eric Caine, director of the CDC-funded Injury Control Research Center for Suicide Prevention at the University of Rochester Medical Center (ICRC-S), notes the need to develop new public health, community-based approaches to preventing suicide. This is consistent with the goals of the Zero Suicide initiative.

**‘This campaign looks to engage the campus community very broadly in prevention efforts, in all departments from housing to athletics’**

Action Alliance, the Public-Private Partnership Advancing the National Strategy for Suicide Prevention. For suicide prevention efforts to prove successful, they cannot simply be relegated to the offices of mental health professionals. Community level outreach and awareness of risk-related behavior is a necessary element for improved and timely access to mental health services.

For additional information on the “Tech Ends Suicide Together” campaign, go to: [http://www.endsuicide.gatech.edu](http://www.endsuicide.gatech.edu)

To read Action Alliance’s Prioritized Research Agenda for Suicide Prevention, go to: [http://actionallianceforsuicideprevention.org/sites/actionallianceforsuicideprevention.org/files/Agenda.pdf](http://actionallianceforsuicideprevention.org/sites/actionallianceforsuicideprevention.org/files/Agenda.pdf)

References:

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**COLUMBIA EPIDEMIOLOGY STUDENTS WORK ON SUICIDE TO BE RELEASED IN FORTHCOMING PUBLICATIONS**

The work of Columbia University Mailman practicum and thesis students who examined suicide issues across data sources and in different populations will be forthcoming later in 2016 or early 2017. The work of Emily Cleveland Manchanda and Rebecca Sabo is currently embargoed pending agency reviews. Emily Cleveland's work will look at the issue in the context of firearm ownership among U.S. Veterans (Supervisors: Drs. Matthew Miller and Deborah Azrael, Harvard); also currently embargoed, Rebecca Sabo's work examines racial and ethnic disparities in suicide between 2005 and 2013 using data from the National Violent Death Reporting System (NVDRS) (Supervisor: Dr. Rashida Dorsey of HHS). Rebecca Sabo holds a Bachelor’s of Science in Foreign Service with a certificate in International Development from Georgetown University and is currently a second-year MPH student in Epidemiology. Prior to coming to Mailman, she was a consultant for the Inter-American Development Bank’s Emerging and Sustainable Cities Initiative, where she helped develop the Initiative’s methodology and brought technical experts and political stakeholders together to create action plans for the cities of Montego Bay (Jamaica), Managua (Nicaragua), San José (Costa Rica), Santa Ana (El Salvador), Bridgetown (Barbados), and Nassau (The Bahamas).
Bullying and suicide: CDC report sheds light

On August 10th, a 13 year-old Staten Island boy, Daniel Fitzpatrick, was found dead by his sister in the family’s attic. Daniel had hanged himself after being frequently bullied by a group of five boys at school. In June, after Daniel had failed the year at school and its administrators had recommended him repeating the year at another institution, he wrote a now widely publicized letter detailing the lack of support he had felt from the teachers and other adults around him at school. He wrote that he had “begged and pleaded” for them to do something and that they had done nothing. Finally, having failed the year, he wrote that he did not care as he had gotten out of the school and that was “all [he] wanted.”

According to the CDC, while it cannot be said that bullying directly causes suicide, bullying and suicide-related behaviors are closely linked. Any involvement with bullying behavior, even as an observer, is a stressor that is associated with greater feelings of helplessness and less connectedness to support from responsible adults. Those who bully or are bullied are at high long-term risk for suicide-related behavior, and those who are both perpetrators and also the victims of bullying exhibit the highest rates of negative mental health outcomes, including suicide ideation.

While the attention focused on the relationship between bullying and suicide is important for increasing awareness about the effects of such behavior, for highlighting the risk to the most vulnerable youth, and for encouraging conversation about the problem, the CDC cautions against framing bullying as a single, direct cause of suicide. This has the potential to perpetuate the idea that suicide is a natural response to bullying and could contribute to normalization of the response. Finally, such a framing also draws attention from other critical risk factors for suicide, which may co-occur with bullying, such as mental illness, coping problems, family dysfunction and substance abuse.

The relationship between bullying and suicide is not a simple one. Most have a combination of risk and protective factors. The goal in the prevention of bullying and suicide-related behaviors, then, is to reduce risk factors and increase protective factors as much as possible.

