

New Hampshire Suicide Prevention



Annual Report 2016

This report was produced by the National Alliance on Mental Illness – NH (NAMI NH), State Suicide Prevention Council (SPC) and Youth Suicide Prevention Assembly (YSPA).

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Introduction

The 2016 Annual Suicide Prevention Report, which includes a summary of accomplishments and data, is the result of the collaborative work of many groups, committees and organizations in NH who have dedicated time and resources to study the issue of suicide and to look at prevention and postvention across the lifespan.

Our work in suicide prevention and postvention is reaching across the state and systems as well as into communities, schools, organizations and individual lives.

Evidence of this includes some of the following accomplishments from calendar year 2016:

- The 2016 Suicide Prevention Conference was again a sold out event and will be transitioning to a larger venue for 2017.
- In 2016 the work of NH's third federal Garrett Lee Smith (GLS) Suicide Prevention Grant was completed, and a GLS Campus Grant entered its second year of funding at UNH.

Many achievements will be described further throughout this report. It is critical to NH in the next few years that we build on the momentum and collective knowledge that has been gained in suicide prevention to strengthen capacity and sustainability to reduce risk of suicide for all NH citizens and promote healing for all of those affected by suicide. Despite significant challenges with a struggling economic environment, including budget cuts and reduced access to mental health and substance use treatment, NH continued to make progress in suicide prevention work in many diverse and systemic ways.

Knowing that it takes all of us working together with common passion and goals, we thank everyone who has been involved in suicide prevention and postvention efforts in New Hampshire.

What's New in this Year's Report?

Some of the new highlights this year include:

- A full year of data from the NH Violent Death Reporting System covering (**pg. 48**)
- New suicide death data from the Centers for Disease Control.
- New self-inflicted injury data from hospitals, emergency departments, and emergency medical service providers.
- New examples of positive outcomes and testimonials related to suicide prevention work being done in NH. These examples are included as text boxes interspersed throughout the report.

Primary Partners

NAMI NH and the Connect Suicide Prevention Program

The National Alliance on Mental Illness (NAMI NH), a grassroots organization of families, consumers, professionals and other members, is dedicated to improving the quality of life of persons of all ages affected by mental illness and/or serious emotional disorders through education, support and advocacy.

NAMI NH's Connect Suicide Prevention Program has been recognized as national best practice and model for a comprehensive, systemic approach: <https://goo.gl/Sf52BT>. The community-based approach of the Connect Program focuses on education about early recognition (prevention); skills for responding to attempts, thoughts and threats of suicide (intervention); and reducing risk and promoting healing after a suicide (postvention). The Connect Program assists the Youth Suicide Prevention Assembly and the State Suicide Prevention Council with implementation and oversight of the NH Suicide Prevention Plan. Connect provides consultation, training, technical assistance, information, and resources regarding suicide prevention throughout the state. NH specific data, news and events, information and resources, and supports to survivors are available on the Connect website at www.theconnectprogram.org.

State Suicide Prevention Council

The mission of the State Suicide Prevention Council (SPC) is to reduce the incidence of suicide in New Hampshire by accomplishing the goals of the NH Suicide Prevention Plan:

- * Raise public and professional awareness of suicide prevention;
- * Address the mental health and substance abuse needs of all residents;
- * Address the needs of those affected by suicide; and
- * Promote policy change.

The success and strength of the Council is a direct result of the collaboration that takes place within its membership and with other agencies/organizations, including public, private, local, state, federal, military and civilian. Strong leadership and active participation comes from the Council's subcommittees: Communication and Public Education; Cross-Training and Professional Education; Data Collection and Analysis; Law Enforcement; Military and Veterans; Public Policy; Suicide Fatality Review; and the Survivors of Suicide Loss subcommittee.

As part of SB 390, which legislatively established the Suicide Prevention Council, the Council is required to annually report on its progress, to both the Governor and the legislature. This report serves that purpose, as well as providing an annual update on the accomplishments of our collective achievements and data regarding suicide deaths and suicidal behavior in NH.

Youth Suicide Prevention Assembly

The Youth Suicide Prevention Assembly (YSPA) is dedicated to reducing the occurrence of suicide and suicidal behaviors among New Hampshire's youth and young adults up to 24 years old. This is accomplished through a coordinated approach to providing communities with current information regarding best practices in prevention, intervention, and postvention strategies and by promoting hope and safety in our communities and organizations.

YSPA is an ad hoc committee of individuals and organizations that meet monthly to review the most recent youth suicide deaths and attempts in order to develop strategies for preventing them. Over the years, YSPA and its partners have been involved with a wide range of suicide prevention efforts in the state – including but not limited to: collecting and analyzing timely data on suicide deaths and attempts, collaborating on an annual educational conference, creating the original NH Suicide Prevention Plan and identifying the need for statewide protocols and training, which were developed through NAMI NH into the Connect Program.

Accomplishments of Suicide Prevention Efforts in NH

State Suicide Prevention Council

This year marked the eighth anniversary of NH's Suicide Prevention Council since its legislative inception.

A major accomplishment of the council in 2016 was the revision of the NH Suicide Prevention Plan. A copy of the updated Plan is available from <https://www.dhhs.nh.gov/dphs/bchs/spc>. The revisions in the new Plan build upon the previous State Suicide Prevention Plan, and the work accomplished over the past several year by the SPC, its subcommittees, and other stakeholders in the state. A key addition to the revised Plan is the concept of a Zero Suicide approach to prevention in the state. This concept was built into the overall goals of the Plan, as well as the goals of the individual SPC subcommittees. More information about Zero Suicide is available from <http://zerosuicide.sprc.org/>. The State Suicide Prevention Plan is not a static document and will continue to evolve over time to incorporate promising concepts and initiatives, such as Zero Suicide, that may help prevent suicides in the state.

As the council looks to continue its work, there is a desire to increase active membership on its subcommittees. This is particularly true for representatives from the field of substance abuse as the council looks at the relationship between substance misuse and suicide prevention. The council also recognizes the role public health departments play in this work and their perspective is important for future collaborations. The public private partnerships developed in subcommittees should continue to expand and enhance the impact of the work being done by the council. Contact any of the committee chairs if you have an initiative you would like to put forward related to suicide prevention efforts throughout the state. The committee meeting schedule and contacts have been included on pages 70-71 of this report.

The council continues to collaborate with the Department of Health and Human Services (DHHS) for statewide leadership and support as it looks to continue its work in promoting evidence based initiatives and refining and expanding the state plan to ensure the very best outcomes for NH citizens.

If you would like to join any of the Suicide Prevention Council Subcommittees, please contact the designated committee chair. The committee meeting schedule has been included on pages 70-71 of this report.

The Youth Suicide Prevention Assembly (YSPA)

The Youth Suicide Prevention Assembly (YSPA) meets monthly in Concord to review cases of youth suicides under the age of 25 in order to identify trends and insights into suicide prevention. YSPA also utilizes monthly meeting for networking, learning about resources, and having formal presentations on a wide variety of related topics.

YSPA continued to highlight educational components in the monthly meetings via speakers who discussed suicide-related risk factors and other key topics which arose through case reviews. Highlights from 2016 include presentations by a loss survivor speaker, representatives from a NH mental health court discussing the process of working with persons with serious mental illness in the judicial system and a speaker from hospice who highlighted the importance of limiting access and assuring safe disposal of medications in households where prescribed drugs may be readily available.

YSPA also featured discussion and a presentation on the result of a survey project conducted by the Bureau of Drug and Alcohol Services and the Public Health Networks regarding substance use among young people. The results of this survey ties in closely with the risk factors and demographics of several of the tragic cases of suicides reviewed at YSPA.

YSPA held its annual “retreat” where the Mission Statement and brochure were updated to reflect current practices. A “refresher” was held later in the year to review parameters around case reviews.

YSPA membership continues to be diverse with regular membership representing behavioral health, substance use, and education at the primary, secondary and post-secondary level, law enforcement, Lesbian, Gay Bisexual, Transgender, and Questioning (LGBTQ) groups, public health, faith leaders, social service agencies and persons with lived experience. For more information on YSPA, please contact Elizabeth Fenner-Lukaitis: Elizabeth.Fenner-Lukaitis@dhhs.nh.gov or Elaine de Mello: edemello@naminh.org.

The NH Suicide Survivor Network

In 2016 **Survivors of Suicide Loss (SOSL)** continued in their efforts of building capacity and establishing groups throughout NH, totaling 16 groups already in motion and attendees growing in numbers as the groups are added. More and more loss survivors are finding comforting support in their healing journey and continue to mentor each other in facilitating and co-facilitating these groups by providing a safe environment to share their experience of suicide loss. These support groups continue to meet on a weekly, bi-weekly and monthly basis. Talk of Teen Survivor of Suicide Loss Peer to Peer support groups is commencing.

An ever growing number of **Loss Survivor Speakers** continued to share their personal stories and experiences of suicide loss to help educate the public and provide healing and support, within their communities and throughout the state. In 2016 there were 37 presentations by loss survivors. A Survivor Voices Speaker's "Refresher" training was held in 2016, with 14 speakers in attendance.

The NH **Survivors of Suicide Loss Resource Packet** was updated and disseminated through the NH Office of Chief Medical Examiner to the next of kin of all those who died by suicide. The book "Healing the Hurt Spirit: Daily affirmations for people who have lost a loved one to suicide", authored by a NH survivor, continues to be available to new loss survivors. An online survey is also provided to solicit feedback on the folder and provide additional avenues to connect loss survivors to help.

Viewings of the American Foundation for Suicide Prevention (AFSP) **International Survivors of Suicide (ISOS) Loss Day** was held at 9 sites throughout NH on the last Saturday before Thanksgiving and gathered over 110 loss survivors together in healing, support and understanding.

Positive Outcomes and Testimonials

Both Sides of the Door - Law Enforcement Investing in Loss Survivors!

This became a workshop that was put together for the 2015 NH Suicide Prevention Conference.

Several Loss Survivors have experienced an extremely difficult situation at the scene of a suicide death in their home. Loss Survivors are in complete shock and disbelief upon finding out of this tragedy and along with their grief, sadness, and devastation. The last thing they don't want is to be separated from their family and their loved one they just lost to suicide.

Through the chaos of a suicide death, most often Loss Survivors aren't given any information during the investigation and Loss Survivors are lead to feel like a suspect in their own home and loved ones death.

The Goffstown law enforcement is one step ahead of this for Loss Survivors, their goal is to "invest" in Loss Survivors and recognize that it is most important to treat Loss Survivors with the utmost respect and compassion at the scene of a suicide death and on a longer term thereafter. With their police department chaplain they work together to make this unimaginable tragic situation run as smoothly as it can.

Since this workshop, it has been discovered that many law enforcement departments in NH do have something like this in place and through the Laconia Police and the Partnership for Public Health in this region a protocol for unattended death/death notification has been put together for all law enforcement to have on hand at the scene to help remind them of what can be done and said to Loss Survivors at the upon a suicide death and an unattended death as well. These two examples help to make a tragic situation such as a suicide death to go a little more smoothly for Loss Survivors to be understood and for law enforcement to make sure that they have that important compassionate part to achieve that goal.

The annual **NH Survivor of Suicide Loss Newsletters** were distributed throughout the state, with hard copies made available at trainings, loss survivor speaking presentations, the State Suicide Prevention Conference, health fairs, libraries, hospitals, healthcare facilities, mental health centers, funeral homes, churches and faith based organizations, and in the Survivors of Suicide Loss Resource Packet. The newsletter was also distributed electronically to many email lists.

More and more loss survivors in NH are becoming involved in advocacy and fundraising efforts for various local and national suicide prevention organizations and initiatives. NH loss survivors volunteered over 1192 hours in 2016. This included displaying the 3 **Life Keeper Memory Quilts** lovingly put together by survivors of suicide loss in NH. The quilts were displayed along with loss survivor resources at many of these events such as the NAMI NH Walk, NH Seacoast and Nashua AFSP “Out of the Darkness Walk”, Nathan’s Ride, Paddle Power, and Compassionate Friends. These quilts were also displayed at all of the loss survivor speaker presentations and the State Suicide Prevention Conference.

The NH State Suicide Prevention Council continues to include survivors of suicide loss in their work by encouraging each existing sub-committee on the council to include loss survivors on the membership. Continued surveys to the NH loss survivor network clearly indicate great interest so they may express their voice, build capacity of support groups, expand the International Survivors of Suicide Teleconference day, and be involved in more advocacy and state wide Loss Survivor events.

This committee encourages new members to join and attend their monthly conference calls.

Positive Outcomes and Testimonials

“The resources for survivors are critical and every effort must be made to keep and improve their availability. Many survivors would not be functioning, healing or grieving if it were not for these programs. For a situation which is not understood by a large percentage of society, support and education still remain a priority”.

A New Hampshire Survivor of Suicide Loss

Attempt Survivor Initiative:

An attempt survivor committee was formed to look at resources and support for individuals in NH who have attempted suicide. The committee had representation from persons with lived experience (loss and attempt survivors), staff from New Hampshire Hospital (NHH), NAMI NH, the Office of Consumer Affairs, and Peer Support Centers in NH. In the course of the committee’s work, models for attempt survivor support groups were researched and the committee began to draft a manual to provide guidance around leading a support groups.

State and Tribal Youth Suicide Prevention and Early Intervention Grant Program (Garrett Lee Smith Grant)

The National Alliance on Mental Illness New Hampshire (NAMI NH) served as the recipient in Cohort VIII for the SAMSHA State and Tribal Youth Suicide Prevention Program grant to expand, develop and direct New Hampshire's youth suicide prevention and early intervention strategy, targeting high risk young people between the ages of 10 and 24. High risk populations within this age group included LGBTQ, those with co-occurring disorders, youth and young adults in the criminal justice system, those with military experience, minority and refugee populations, young adults not enrolled in college, justice-involved young people, and youth and young adults who have had an inpatient psychiatric admission. This three year grant concluded September 30, 2016.

The following activities and accomplishments were among the results achieved through this three year grant:

An Aftercare Liaison position was established at the state psychiatric hospital to work closely with youth through the age of 24 who were admitted for suicide risk. This liaison worked closely with these individuals and their support system to provide psycho education around mental illness and suicide risk, engage them in safety planning, link them with NAMI and other resources, and arrange for a smooth transition back into the community. Through a holistic, collaborative approach, the After Care Liaison could help to ensure a successful recovery after hospitalization for up to 90 days post discharge. While evaluation is still underway, the project was able to avert several adverse incidents. This liaison position has been retained as a permanent position with the hospital since the grant has expired and has served as a model for other hospitals around the country.

During the period of the grant NH Hospital also established a suicide prevention task force to look at implementing best practices throughout the hospital through a Zero Suicide approach. Included in their strategies was to bring the Connect Suicide Prevention training into the orientation program for all new Mental Health Workers at the hospital, expand on the use of safety plans for patients admitted for suicide risk, and include suicide prevention information in all discharge packets. The NH Hospital suicide prevention task force continues to meet monthly in an effort to continue comprehensive implementation of best practices throughout the facility. Based on the Caring Contacts studies that show a decrease in suicide risk and increase in engagement in treatment, grant project staff worked with Headrest, the certified crisis call center for all National Suicide Prevention Lifeline (NSPL) calls originating in NH, to provide follow-up to callers age 24 and under to reduce risk and encourage engagement with treatment resources. Call backs were made to youth 24 years old and younger, and any special demographics have been noted wherever possible (i.e. callers who are LGBTQ, in the military, have co-occurring disorders, are over 18 and not in college, or other high risk minority populations). A computer program implemented during the grant period enabled Headrest and evaluators to get data that identified how many callers received a call back and track the location of calls and categories that callers identified with under the target areas of the grant. Headrest has made a commitment to continue to make callbacks as part of sustaining this effort beyond the grant.

Grant Project Staff partnered with three Regional Public Health Networks (RPHNs) to create community-based interventions to specifically target high risk youth, especially those who are not enrolled in college, substance users and members of minority or refugee communities. The three regions selected have the largest number of resettled refugees in NH and demonstrate significant substance abuse rates among their youth, as well as high suicide and suicidal ideation rates when compared to national averages. These regions conducted extensive training and planning using the Connect model to implement best practices across their regions, with notable changes in both prevention and postvention approaches, including numerous schools and communities that now have comprehensive crisis response plans, adult and youth leadership training and postvention preparedness including the development or expansion of survivor supports. Over 80 Connect trainers were trained in prevention and postvention during the grant period, providing training to hundreds of community members, police departments, colleges and schools, and several statewide CALM and Assessing and Managing Suicide Risk (AMSR) trainings were also offered to dozens of providers throughout the state. Connect Youth Leaders were trained in schools in every region. Broad knowledge and use of best practices have been illustrated in a variety of ways, such as through educating and guiding the media around safe messaging and rapid mobilization of supports and resources in the aftermath of a tragic suicide.

Statewide initiatives worked to strengthen NH's capacity for addressing state and national goals for suicide prevention and intervention. To this end, active work with SPC and YSPA were able to provide oversight on the state plan and targeted work through SPC subcommittees including work with the media across the state with consistent results; support of the NH Gun Shop Project initiatives including the development of suicide prevention video created by the NH Firearm Safety Coalition and an online CALM training for Emergency Medical Services; extending loss survivor supports statewide through support groups with expansion of groups to fourteen by the end of the grant period and numerous advocacy networks, International Survivor Of Suicide (ISOS) teleconference events, and active involvement of loss survivors in the suicide prevention conference, the NAMI NH WALK and the presence of TEAM SOS (Survivors of Suicide Loss) throughout NH; efforts to reach out to specialized high risk populations by training Connect trainers in the Bhutanese Refugee Community to deliver the Connect Training in Nepalese and in the Deaf and Hard of Hearing Community to conduct the Connect Suicide Prevention Training in sign language. An initiative around survivors of suicide attempts evolved into a committee which formed to research and codify a model for a support group for attempt survivors. After looking at national models and a support group in the Keene area, the Attempt Survivor Committee developed a manual outlining the guidelines and process for facilitating a support group for attempt survivors for others to replicate.

Overall infrastructure has been strengthened as noted by the many communities and schools who now consult with each other to implement best practices with support from state and national expertise. Capacity is also evident through a growing network of loss survivors, trainers and regions who are prepared to take initiative around advocacy and education and/or respond at the time of a crisis in an appropriate and coordinated manner. Further evidence that a culture of best practices has been established has been noted by a fairly consistent way that media has been responsible in reporting on suicide and utilized some of the best practice approaches in their reporting styles as well as consultation with grant staff and other suicide prevention experts in NH.

Specialized projects such as the NH Gun Shop Project and continue to receive national attention in the media and journal articles. Many states have joined in to replicate or otherwise utilize the project across the U.S.

Campus Youth Suicide Prevention and Early Intervention Grant Program (Garrett Lee Smith Grant)

University of NH (UNH):

UNH is two years into a three year grant sponsored by the Substance Abuse and Mental Health Services Administration (SAMSHA). The focus of the grant is to further develop suicide prevention efforts on campus. As of July 2017, as part of the grant hundreds of individuals have received in person trainings and over 3500 have completed online trainings. These training were created to prepare staff, educators, and students to recognize signs of psychological distress and to help connect individuals in need with appropriate services. These trainings have been provided in collaboration with the Campus Suicide Prevention Committee (CSPC), Psychological and Counseling Services (PACS), and numerous other campus partners.

Annual NH Suicide Prevention Conference

The SAMSHA GLS grant helped to support NH's 2016 Suicide Prevention Conference: "Suicide Prevention: It's Happening Here!" which once again attracted a wide range of attendees from virtually every sector of the community. Hosted by YSPA, SPC, NAMI NH and NH Public Health Networks, the conference kicked off with a keynote speaker by Richard McKeon, Chief of the Suicide Prevention Branch in the Center for Mental Health Services, Substance Abuse & Mental Health Services Administration (SAMHSA) on Zero Suicide, and closed with a plenary led by Plymouth State University Students and students from NH High Schools. Workshops included topics related to substance misuse, ethics, postvention, cyberbullying and self care.

Positive Outcomes and Testimonials

"This Conference saved my life"

Feedback from an attendee at the Annual NH Suicide Prevention Conference

Regional Initiatives

New developments in the Seacoast Region emerged in 2016 through Exeter Hospital's Community Impact Program, with a goal to substantially impact the risk of youth suicide in the greater Seacoast area of New Hampshire. Youth suicide was identified in the Hospital's last two Community Health Needs Assessments as a growing concern in our community and is the second leading cause of death in New Hampshire for individuals age 10-34. In October 2016, Exeter Hospital launched a four-year, \$250,000 annual grant cycle. Grants are being awarded to organizations that address the root causes of youth suicide, including substance misuse, teen depression, social isolation, abuse, bullying, lack of awareness, and the communication and engagement barriers associated with the stigma of each of those issues within Rockingham County.

State and National Attention on NH initiatives

CALM (Counseling on Access to Lethal Means) – A national best practice training that was developed in NH and has been utilized throughout the state and in dozens of states around the U.S. The method of lethal means reduction is cited as an effective suicide prevention practice in the National Strategy for Suicide Prevention and has been offered to first responders, medical providers, schools and families across NH and the U.S. The CALM training is now available online through the SPRC website.

Connect – Over 50 individuals were trained as Connect Prevention or Postvention Trainers in 2016 throughout NH representing schools, campuses, law enforcement, social services, mental health and public health networks and homeless liaisons. Connect Trainings of Trainers were conducted with leaders from many of these sectors to extend the program throughout systems and communities across NH.

The Connect Suicide Prevention and Postvention program also continues to expand its geographical reach with consultation, trainings and workshops. As of the end of 2016, Connect Suicide Prevention training has had a presence in 43 US states, as well as the British Isles, Canada, and the Pacific Islands.

ASIST (Applied Suicide Intervention Skills Training) – Offered by the National Guard, the two day ASIST training continues to be available to military members and civilians across NH, expanding the repertoire of tools and skills of citizens across the state to respond to persons at risk.

Every year the NH Army National Guard recognizes September as Suicide Prevention Awareness Month and conducts Suicide Postvention training. Suicide Postvention is the 3rd Phase of the Suicide Prevention Program in accordance with Army Regulation 600-63: Army Health Promotion. Phase I is Suicide Awareness Prevention: using Ask, Care, Escort (ACE) training model. Phase II is Suicide Intervention: using the ASIST model. Phase III is Suicide Postvention: using NAMI NH's Connect Training model. The annual goal is to provide all Commanders, their First Sergeants and their designated Suicide Intervention Officers (SIOs) training in all three phases of the Suicide Prevention Program to enable them to create and manage their Commander's Suicide Prevention Policy.

Postvention provides the tools to better prepare themselves what to expect after a suicide death and what steps are needed to be done quickly and safely to prevent contagion and other high risk behaviors from happening to the family members and peers of the fallen service member. In 2016 37 Service Members attend Postvention Training.

Positive Outcomes and Testimonials

“Before I had the [Connect] training, I wouldn't have known what to do and would have probably done nothing. Because of the training, I got involved right away and I knew where to turn to get support and resources immediately.”

Tammy Levesque, Lakes Region Partnership for Public Health on responding to a suicide in her region

SOS (Signs of Suicide) – An evidence based secondary school-based suicide prevention program that includes screening and education, was introduced to a number of schools in NH with training of trainers for sustainability, strengthening the safety net and awareness around youth suicide prevention in the school systems throughout the state. These efforts were supported at a number of schools by the Connor’s Climb Foundation.

2016 Data

SPC/YSPA Data Subcommittee Membership Representation 2016-2017

Injury Prevention Center at CHaD
National Alliance of Mental Illness New Hampshire
New Hampshire Army National Guard
State of New Hampshire Department of Corrections
State of New Hampshire Department of Health and Human Services
State of New Hampshire Office of Chief Medical Examiner

Introduction

The data presented in this report is the result of collaboration among a variety of organizations and people. The data were compiled by the two major collaborative groups for suicide prevention in New Hampshire, the YSPA and the SPC. YSPA and SPC merged data efforts over the past several years, combining historical expertise with emerging methods. YSPA has been collecting and analyzing data about youth and young adult suicide deaths and behavior over the last 19 years and first created this report format in 2003. The SPC has been analyzing and planning for data capacity improvements for the last 8 years. Key areas of interest and concern for suicidal behavior in NH are included in this report. A data interpretation and chart reading section has been included at the end of the report.

While each suicide is a separate act, only aggregate data is presented in this report. Aggregate data helps inform which populations and age groups are most at risk, reveals points of particular vulnerability, and thus leads to determinations of prevention and intervention efforts as well as where to direct program funding. It also protects the privacy of individuals and their families. We respectfully acknowledge that the numbers referred to in this report represent tragic lives lost, leaving many behind who are profoundly affected by these deaths.

When reading this report it is important to note that two primary sources of NH data were used. One main data source is Vital Records data (official death records for NH residents) for the State of NH obtained from Health Statistics and Data Management (HSDM), Division of Public Health Services, NH DHHS. The other main data source is the Office of Chief Medical Examiner (OCME) for the State of NH. These two key data sources cover similar populations, but small differences in numbers and rates may occur due to differences in how the data is collected. The Vital Records data, as reported by the Centers for Disease Control (CDC), include suicide deaths of NH residents that occurred both inside and outside of the state. The OCME data includes all suicide deaths that occurred in NH regardless of where the individual resided and does not capture suicide deaths by NH residents that occurred outside of the state. Additional data sources were used for specific purposes that may have varying methods of collection. All of the charts and graphs in this report include citations of data source to prevent confusion. Different data sources also vary regarding how quickly the information is made available and how often it is collected/reported. The time periods reported for each source are indicated with the corresponding Table or Figure.

Demographic profile of New Hampshire

Comparing New Hampshire to the US

Tables 1 through 6 below present NH and US demographic characteristics, as well as indicators of substance use and mental health. NH is a small state, with just over 1.3 million residents (US Census, 2016). Overall, NH is relatively homogeneous in terms of race and ethnicity, and has above average ratings for economic factors and education. NH is above the US average for alcohol and illegal drug use, with the 2nd highest rate in the US for alcohol use and the 7th highest rates for marijuana use (National Survey on Drug Use and Health, 2014-2015).

Table 1

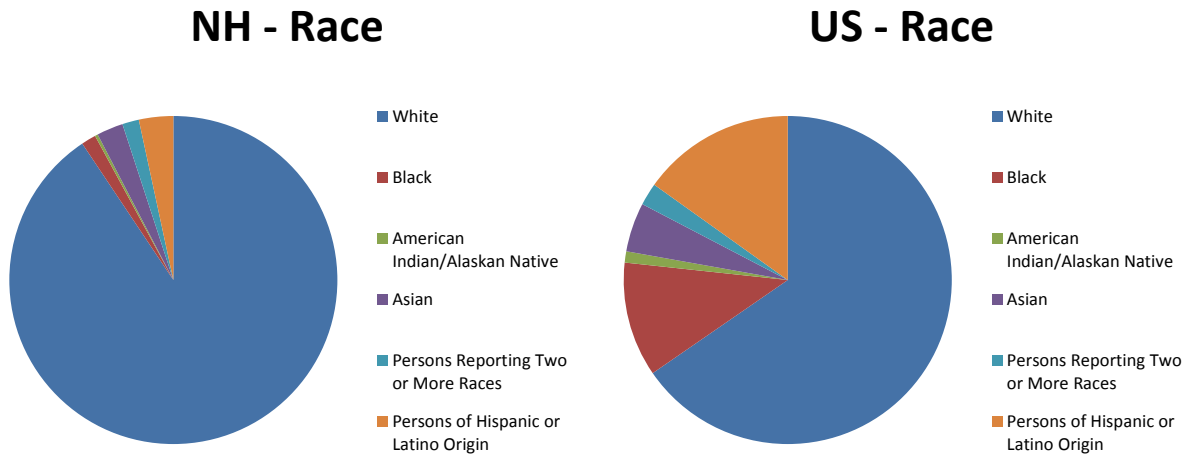
Race/Ethnicity.

| | New Hampshire | United States |
|--------------------------------------|---------------|---------------|
| White | 93.8% | 76.9% |
| Black | 1.5% | 13.3% |
| American Indian/Alaskan Native | 0.3% | 1.3% |
| Asian | 2.7% | 5.7% |
| Persons Reporting Two or More Races | 1.7% | 2.6% |
| Persons of Hispanic or Latino Origin | 3.5% | 17.8% |

Source: US Census Bureau 2016

Figure 1

NH and US Race/Ethnicity.



Source: US Census Bureau 2016

Table 2

Age.

| | New Hampshire | United States |
|-----------|----------------------|----------------------|
| Under 18 | 19.52% | 22.79% |
| 18 to 24 | 9.55% | 9.55% |
| 25 to 44 | 23.43% | 26.35% |
| 45 to 64 | 30.50% | 26.07% |
| 65 to 74 | 10.16% | 8.86% |
| 75 and Up | 6.83% | 6.38% |

Source: US Census Bureau 2016

Table 3

Economic Factors.

| | New Hampshire | United States |
|----------------------------------|----------------------|----------------------|
| Unemployed Residents | 3.9% | 5.2% |
| Persons Below Poverty Level | 8.9% | 15.5% |
| Persons Without Health Insurance | 9.3% | 13.0% |
| Per Capita Income (Yearly) | \$34,362 | \$28,930 |
| Median Household Income | \$66,779 | \$53,889 |
| Owner Occupied Homes | 71.0% | 63.9% |
| Median Home Value | \$237,300 | \$178,600 |

Sources: US Census Bureau American Community Survey 2015

Table 4

Education – population age 25 and older.

| | New Hampshire | United States |
|---|----------------------|----------------------|
| Less Than High School Graduate | 7.7% | 13.3% |
| High School Graduate or Associates Degree | 57.4% | 57% |
| Bachelor’s Degree or Higher | 34.8% | 29.7% |

Source: US Census Bureau American Community Survey 2015

Table 5

Substance Use – Individuals Age 12 and Up.

| | New Hampshire | United States |
|----------------------------|----------------------|----------------------|
| Marijuana Use – Past Month | 12.06% | 8.34% |
| Alcohol Use – Past Month | 63.63% | 52.18% |
| Tobacco Use – Past Month | 24.94% | 24.56% |

Source: National Survey on Drug Use and Health, 2014-2015

Table 6

Mental Health Indicators – Individuals Age 18 and Up.

| | New Hampshire | United States |
|--------------------------------------|----------------------|----------------------|
| Serious Mental Illness – Past Year | 5.42% | 4.05% |
| Major Depressive Episode – Past Year | 8.71% | 6.64% |
| Had Thoughts of Suicide – Past Year | 4.94% ¹ | 3.99% |

Source: National Survey on Drug Use and Health, 2014-2015

The Big Picture: Suicide in NH and Nationally

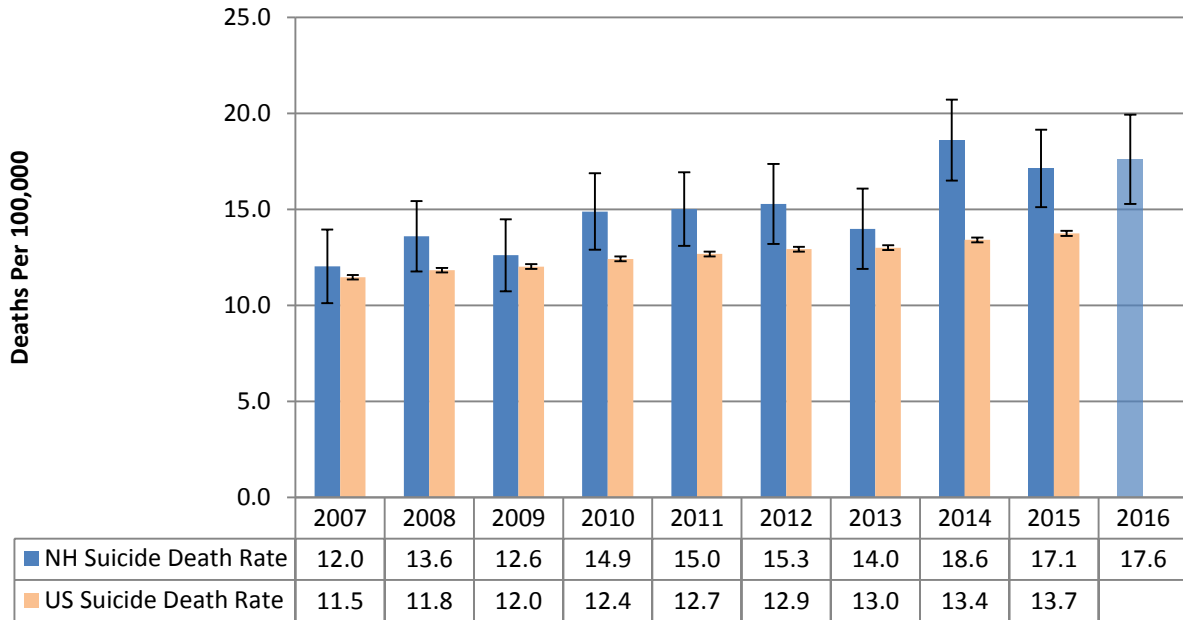
The Tables and Figures below depict various suicide related data. Some are specific to NH while others compare NH and national statistics.

Figure 2 (pg. 18) presents the suicide rate in NH and the US for the past ten years. The rate in NH has varied from year to year, due to its small size, while the US rate has remained more consistent. Even though the NH rate has varied, until 2014 there had been no statistically significant differences from one year to the next since at least 2000. 2010 was the first year in recent history where there was a statistically significant difference compared to any other recent year. The 2010-2012 suicide rates are significantly greater than the rates for 2000, 2002, and 2004. This appears to be consistent with changes in the rates of suicide nationally. In 2014 there was a spike in the NH rate that is significantly above the rates prior to 2010. Such an extreme increase was not seen in other states or for the US as a whole in 2014.

¹ A 2016 report found an increase in reported thoughts of suicide from 2013-2014 among NH residents between the ages of 18 and 24 - http://www.samhsa.gov/data/sites/default/files/report_2387/ShortReport-2387.pdf.

Figure 2
Crude Suicide Death Rates per 100,000 in NH by Year 2007-2016.

NH and US Suicide Deaths By Year - 2007 to 2016 (Crude Rate)



Source: 2007-2015 – CDC Data; 2016 – NH OCME Data

Table 7 (pg. 19) displays the 10 leading causes of death for people of different age groups in NH. From 2011-2015, suicide among those aged 15-34 was the second leading cause of death for NH and nationally. Suicide rates for individuals age 15-34 during 2011-2015 were behind only deaths due to unintentional injury; primarily motor vehicle crashes and unintentional overdose deaths in NH within this age group. Suicide among individuals of all ages was the 9th leading cause of death in NH, and the 10th leading cause of death nationally.

Table 7
10 Leading Causes of Death, New Hampshire, by Age Group, 2011 – 2015.

| Rank | Age Groups | | | | | | | | | | All Ages |
|------|--|--------------------------------------|-------------------------------------|-------------------------------------|--|--|---------------------------------------|--|---|---|---|
| | <1 | 1-4 | 5-9 | 10-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | |
| 1 | Congenital Anomalies 44 | Unintentional Injury 10 | Malignant Neoplasms (*see note) | Malignant Neoplasms 11 | Unintentional Injury 252 | Unintentional Injury 458 | Unintentional Injury 381 | Malignant Neoplasms 993 | Malignant Neoplasms 2,572 | Heart Disease 10,179 | Malignant Neoplasms 13,455 |
| 2 | Short Gestation 41 | Congenital Anomalies (*see note) | Unintentional Injury (*see note) | Suicide (*see note) | Suicide 109 | Suicide 149 | Malignant Neoplasms 207 | Heart Disease 570 | Heart Disease 1,195 | Malignant Neoplasms 9,561 | Heart Disease 12,126 |
| 3 | Maternal Pregnancy Comp. 29 | Heart Disease (*see note) | Homicide (*see note) | Unintentional Injury (*see note) | Malignant Neoplasms 20 | Malignant Neoplasms 76 | Suicide 166 | Unintentional Injury 453 | Unintentional Injury 355 | Chronic Low. Respiratory Disease 2,936 | Chronic Low. Respiratory Disease 3,377 |
| 4 | Placenta Cord Membranes 17 | Homicide (*see note) | Cerebro-Vascular (*see note) | Benign Neoplasms (*see note) | Heart Disease 14 | Heart Disease 38 | Heart Disease 119 | Suicide 281 | Chronic Low. Respiratory Disease 329 | Cerebro-Vascular 2,082 | Unintentional Injury 3,276 |
| 5 | SIDS 11 | Influenza & Pneumonia (*see note) | Congenital Anomalies (*see note) | Congenital Anomalies (*see note) | Homicide 14 | Congenital Anomalies 14 | Liver Disease 37 | Liver Disease 165 | Liver Disease 250 | Alzheimer's Disease 1,924 | Cerebro-vascular 2,319 |
| 6 | Circulatory System Disease 10 | Malignant Neoplasms (*see note) | Heart Disease (*see note) | Heart Disease (*see note) | Cerebro-vascular (*see note) | Homicide 12 | Diabetes Mellitus 23 | Diabetes Mellitus 106 | Diabetes Mellitus 248 | Unintentional Injury 1,349 | Alzheimer's Disease 1,966 |
| 7 | Respiratory Distress(*see note) | Benign Neoplasms (*see note) | Suicide (*see note) | Homicide (*see note) | Chronic Low Respiratory Disease (*see note) | Diabetes Mellitus (*see note) | Homicide 17 | Chronic Low. Respiratory Disease 85 | Suicide 203 | Diabetes Mellitus 1,083 | Diabetes Mellitus 1,473 |
| 8 | Necrotizing Enterocolitis (*see note) | | | | Benign Neoplasms (*see note) | Chronic Low Respiratory Disease (*see note) | Cerebro-vascular 13 | Cerebro-vascular 64 | Cerebro-vascular 144 | Influenza & Pneumonia 1,022 | Influenza & Pneumonia 1,119 |
| 9 | Neonatal Hemorrhage (*see note) | | | | Congenital Anomalies (*see note) | Liver Disease (*see note) | Chronic Low Respiratory Disease 13 | Viral Hepatitis 27 | Septicemia 73 | Nephritis 782 | Suicide 1,060 |
| 10 | Unintentional Injury (*see note) | | | | Diabetes Mellitus (*see note) | Complicated Pregnancy (*see note) | Two Tied (*see note) | Influenza & Pneumonia 24 | Viral Hepatitis 69 | Parkinson's Disease 582 | Nephritis 869 |

Produced By: Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention

*Note: Beginning with 2008 data, the CDC has suppressed state-level counts for categories with fewer than ten deaths

Data Source: National Center for Health Statistics, National Vital Statistics System

The vast majority of violent deaths in NH are suicides. For every homicide in NH, there are approximately 10 suicides. This ratio is in sharp contrast to national statistics, which show fewer than 2 suicides for every homicide. For every suicide death in NH and nationally, there are approximately 3 deaths classified as unintentional injuries. Overall, suicide constitutes a larger proportion of all traumatic deaths in NH than in the US as a whole.

The most effective way to compare NH to the US is to look at suicide death rates. **Table 8** presents NH and US suicide death rates by age group.

Table 8
Crude Suicide Death Rates per 100,000 in NH & US, by age group, 2011-2015.

| | ALL AGES | YOUTH 10-17 | YOUNG ADULTS 18-24 | YOUTH AND YOUNG ADULTS 10-24 |
|----|--------------|----------------|-----------------------|------------------------------------|
| NH | 16.01 | 3.78 | 17.35 | 12.98 |
| US | 13.16 | 3.77 | 13.20 | 8.34 |

| | AGES 25 TO 39 | AGES 40 TO 59 | AGES 60 TO 74 | OVER 75 |
|----|------------------|------------------|------------------|------------|
| NH | 19.43 | 24.66 | 14.82 | 15.35 |
| US | 15.25 | 19.24 | 15.52 | 17.58 |

Source: CDC WISQARS

Adults age 40 to 59 had the highest suicide rates of all age groups identified above (24.66 NH, 19.24 US) from 2011-2015 in both NH and the US. There is a tremendous increase in the rates from youth (ages 10-17) to young adults (ages 18-24) revealing the transition from middle/late adolescence to late adolescence/early adulthood as a particularly vulnerable time for death by suicide.

Youth and Young Adult Suicide in NH

In the 10 years from 2007-2016, 220 NH youth and young adults aged 10-24 have lost their lives to suicide. **Table 9** (pg. 22) depicts the most up-to-date information about these youth and young adults as reported by the OCME in NH and collected and aggregated by YSPA. Males are much more likely to die by suicide in NH (80%) and nationwide. Hanging and firearms were used with nearly the same frequency among youth and young adult deaths during this period. Nationally, a greater proportion of youth and young adults who die by suicide use firearms.

From 2004 to 2006 a decreasing trend among youth suicide deaths was noted. This trend reversed in 2007. This increase in youth suicide deaths is apparent when comparing the five year period from 2007-2011 to the following five year period from 2012-2016. From the first period to the second there was an 18% increase. When looking at this it is important to keep in mind that the total number of youth deaths are few in number, and a relatively small increase in the number of deaths can substantially impact the percent increase. Additionally, looking solely at the number of deaths does not take into account increase in population size. The rates presented

on the chart of deaths over rolling three-year intervals shown on **pages 59-60** help to smooth out small year to year fluctuations, and also addresses population increases by presenting rates per 100,000.

Please note that **Table 9** is based on OCME data. “Hanging/Asphyxiation” refers to all forms of suffocation (e.g. hanging, object covering nose and mouth) and “Drugs/Poison” refers to all suicide cases of drug-related deaths or ingested poisons. Suicides where carbon monoxide poisoning was the cause of death are reported in the “Other” section. These categories are slightly different from those used by the Center for Disease Control and Prevention (CDC), which places suicides by carbon monoxide into the “Poison” category (e.g., **Figure 24**).

Positive Outcomes and Testimonials

A student and his mother were sent to a NH emergency department one spring morning for an emergency suicide assessment based on requirements of the School District Suicide Intervention Protocol. The student had expressed suicidal warning signs. The School Resource Officer and a member of the Response Team, both known by the family, joined them at the hospital.

During the process the student's mother shared that her son had been asking for permission to take his father's rifle and go out into the woods near their home. The mother had denied his request and explained her safety concerns to him.

There was a simultaneous shiver that went through each of us when we registered the great relief of intervening with an emergency assessment before a suicide attempt...especially with such a potentially lethal plan.

The student was able to share his feelings and a comprehensive follow up plan was created. The student and his mother learned about the resources available to help them both.

Table 9
NH Youth (age 24 and under) Suicide Death Trend, by Gender, Age Group and Method, 2007-2016.

| Year | Total | Male | Female | ≤ 19 | 20-24 | Firearms | Hanging/ Asphyxiation | Drugs/ Poison | Other |
|--|-------------|------------|------------|------------|------------|------------|--------------------------|------------------|-----------|
| 2007 | 13 | 9 | 4 | 3 | 10 | 5 | 4 | 2 | 2 |
| 2008 | 15 | 10 | 5 | 8 | 7 | 5 | 9 | 1 | 0 |
| 2009 | 20 | 18 | 2 | 10 | 10 | 12 | 7 | 0 | 1 |
| 2010 | 24 | 22 | 2 | 11 | 13 | 11 | 11 | 2 | 0 |
| 2011 | 29 | 23 | 6 | 9 | 20 | 10 | 15 | 2 | 2 |
| 2007- 2011 Sub Total | 101 | 82 | 19 | 41 | 60 | 43 | 46 | 7 | 5 |
| Percent of Sub- Total² | 100% | 81% | 19% | 41% | 59% | 43% | 46% | 7% | 5% |
| 2012 | 18 | 15 | 3 | 8 | 10 | 10 | 7 | 0 | 1 |
| 2013 | 21 | 17 | 4 | 6 | 15 | 7 | 10 | 3 | 1 |
| 2014 | 33 | 26 | 7 | 8 | 25 | 23 | 8 | 0 | 2 |
| 2015 | 19 | 16 | 3 | 7 | 12 | 7 | 10 | 1 | 1 |
| 2016 | 28 | 21 | 7 | 12 | 16 | 14 | 13 | 1 | 0 |
| 2012 - 2016 Sub Total | 119 | 95 | 24 | 41 | 78 | 61 | 48 | 5 | 5 |
| Percent of Sub- Total¹ | 100% | 80% | 20% | 34% | 66% | 51% | 40% | 4% | 4% |
| Total | 220 | 177 | 43 | 82 | 138 | 104 | 94 | 12 | 10 |
| Percent of Total¹ | 100% | 80% | 20% | 37% | 63% | 47% | 43% | 5% | 5% |

Produced by: NAMI NH
Data Source: NH OCME

² Note: Rounding may cause percentages to not total to 100%

Figure 3

NH Youth, Ages 10-24, Suicide Deaths.

New Hampshire Youth Suicides from 2007 to 2016

Data Source: Office of the Chief Medical Examiner, NH

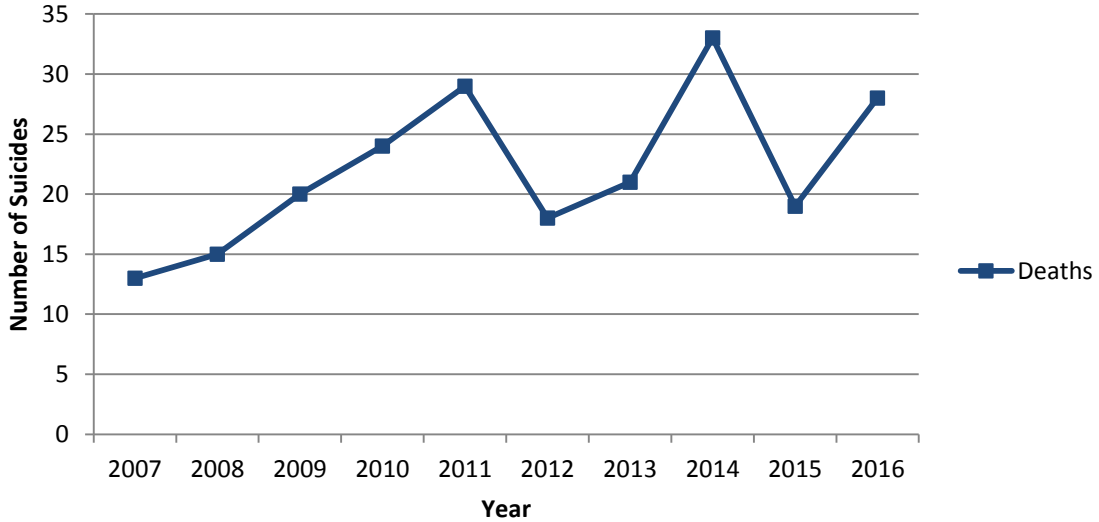
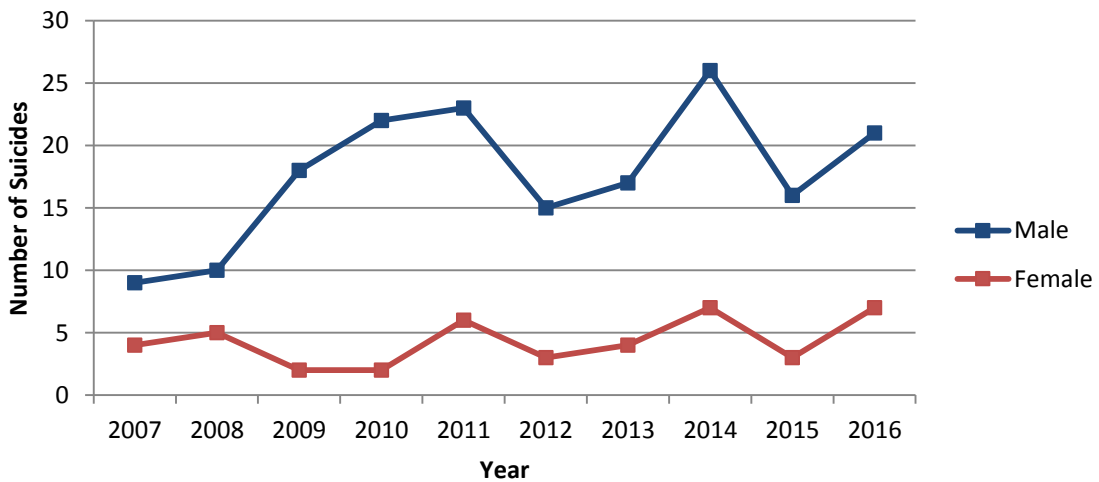


Figure 4

NH Male Youth Suicide Deaths Decrease then Increase 2007-2016, While Female Youth Rates have Remained Relatively Stable.

New Hampshire Youth Suicides from 2007 to 2016 by Gender

Data Source: Office of the Chief Medical Examiner, NH



Older Adult Suicide in NH

In light of the rapidly expanding number and proportion of older adults in New Hampshire's population, suicide in older adults is on course to become a growing public health concern. Added to the changing demographics is the also rising prevalence of mental illness and substance use disorders. Untreated mental illness such as depression is a significant risk factor for suicide among all ages, but it is particularly of concern in later life as older adults with depression or other mental health conditions receive treatment at markedly lower rates than the rest of the population.³ In 2016, while the overall number of deaths did not change substantially from the prior year, there was a substantial change in the proportion of those deaths for individuals age 65+.

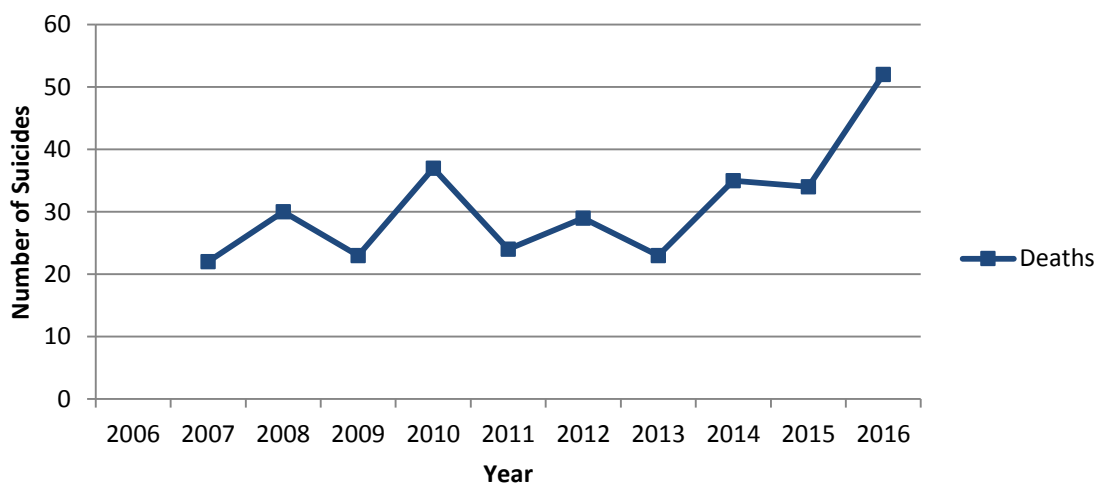
Another concern is the rate of attempts to completed suicides for older adults. The lethality rate in people over 65 years of age is markedly higher in comparison to other age groups. While there is one death for every 36 attempts in the general population, there is one death for every four attempts in individuals over 65. One related factor is that aged individuals generally to be physically frailer than younger individuals and are therefore less likely to survive self-injurious acts. A second is that older adults tend to be more isolated than younger people, making detection or timely intervention less likely. A third factor is the lethality of means; compared to other age groups, adults over 65 are more likely to use firearms as a means of suicide.

Figure 5

NH Older Adults, Ages 65+, Suicide Deaths.

New Hampshire Older Adult (Ages 65+) Suicides from 2007 to 2016

Data Source: Office of the Chief Medical Examiner, NH



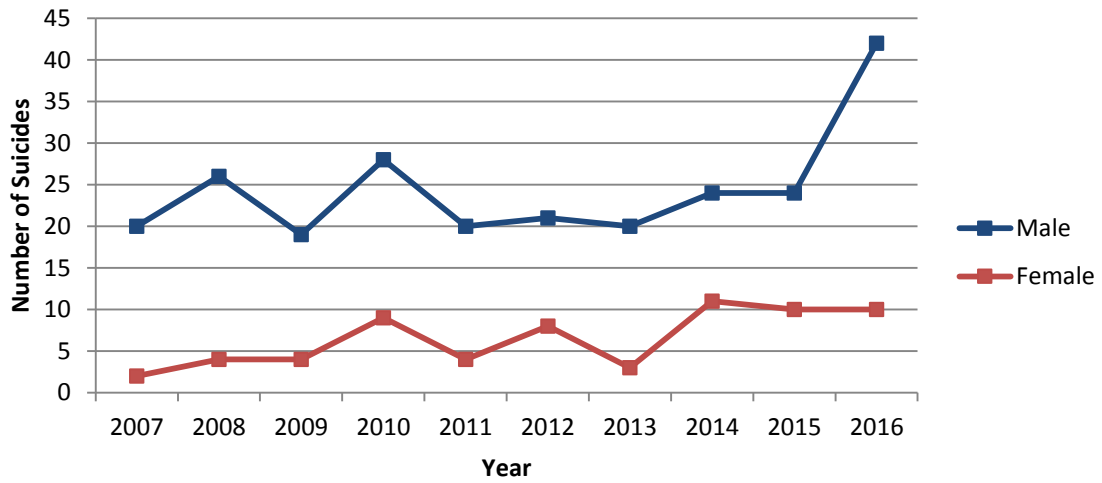
³ Conwell Y. Suicide and suicide prevention in later life. Focus 2013; 11(1): 39–47.

http://www.aoa.gov/AoA_Programs/HPW/Behavioral/docs2/Suicide%20Prevention%20Webinar%20Presentation%20Slides2.pdf#page=14

Figure 6
The Number of Male and Femal Older Adult Deaths are Relatively Stable from Year to Year.

New Hampshire Older Adult (Ages 65+) Suicides 2007 to 2016 by Gender

Data Source: Office of the Chief Medical Examiner, NH



Suicide Across the Lifespan in NH

Table 10 presents the most up-to-date data on individuals of all ages in NH as reported by the OCME. This data covers a shorter period of time than the data for youth because tracking all ages data through the OCME is a more recent state initiative. The number of deaths by year have been plotted in **Figure 7** (pg. 27) and **Figure 8** (pg. 27).

Table 10
NH All Ages Suicide Death Trend, by Gender, Age Group and Method, 2007-2016.

| Year | Total | Male | Female | ≤ 24 | 25-44 | 45-64 | 65+ | Firearms | Hanging/ Asphyxiation | Drugs/ Poison | Other |
|-------------------------------------|-------------|-------------|------------|------------|------------|------------|------------|------------|--------------------------|------------------|------------|
| 2007 | 150 | 115 | 35 | 13 | 47 | 68 | 22 | 69 | 31 | 28 | 22 |
| 2008 | 175 | 135 | 40 | 15 | 64 | 66 | 30 | 86 | 42 | 20 | 27 |
| 2009 | 167 | 136 | 31 | 20 | 51 | 73 | 23 | 80 | 48 | 31 | 8 |
| 2010 | 206 | 159 | 47 | 24 | 56 | 89 | 37 | 103 | 49 | 40 | 14 |
| 2011 | 200 | 162 | 38 | 29 | 49 | 98 | 24 | 77 | 61 | 37 | 25 |
| 2012 | 203 | 160 | 43 | 18 | 60 | 96 | 29 | 97 | 56 | 29 | 21 |
| 2013 | 182 | 140 | 42 | 21 | 46 | 92 | 23 | 81 | 60 | 31 | 10 |
| 2014 | 252 | 192 | 60 | 33 | 83 | 100 | 36 | 112 | 70 | 42 | 28 |
| 2015 | 225 | 162 | 63 | 19 | 76 | 97 | 33 | 100 | 67 | 40 | 18 |
| 2016 | 235 | 173 | 62 | 28 | 76 | 78 | 52 | 121 | 62 | 34 | 17 |
| Total | 1995 | 1534 | 461 | 220 | 608 | 858 | 309 | 926 | 546 | 332 | 191 |
| Percent of Total⁴ | 100% | 77% | 23% | 11% | 30% | 43% | 15% | 46% | 27% | 17% | 10% |

Produced by: NAMI NH

Data Source: NH OCME

⁴Note: Rounding may cause percentages to not total to 100%

Figure 7
NH Residents, All Ages, Suicide Deaths 2007 - 2016

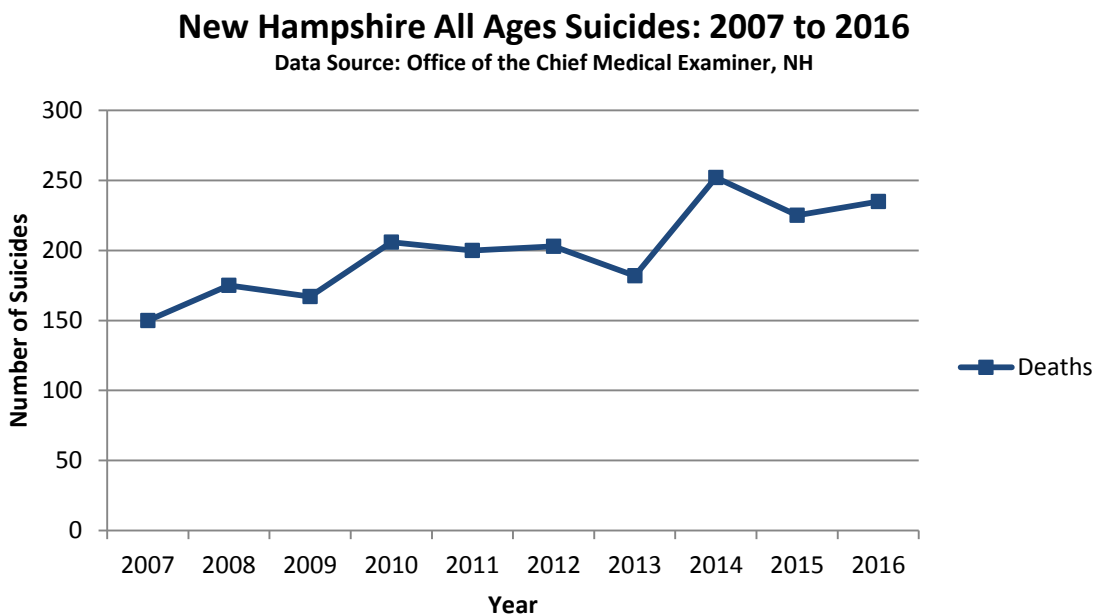


Figure 8
NH Male and Female Suicide Rates 2007 – 2016

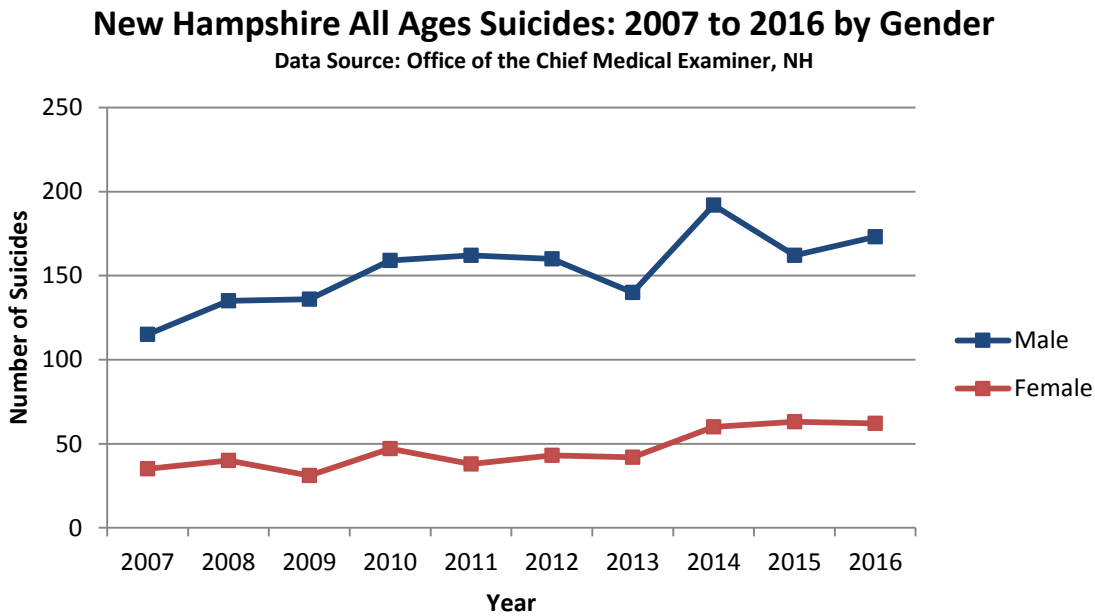


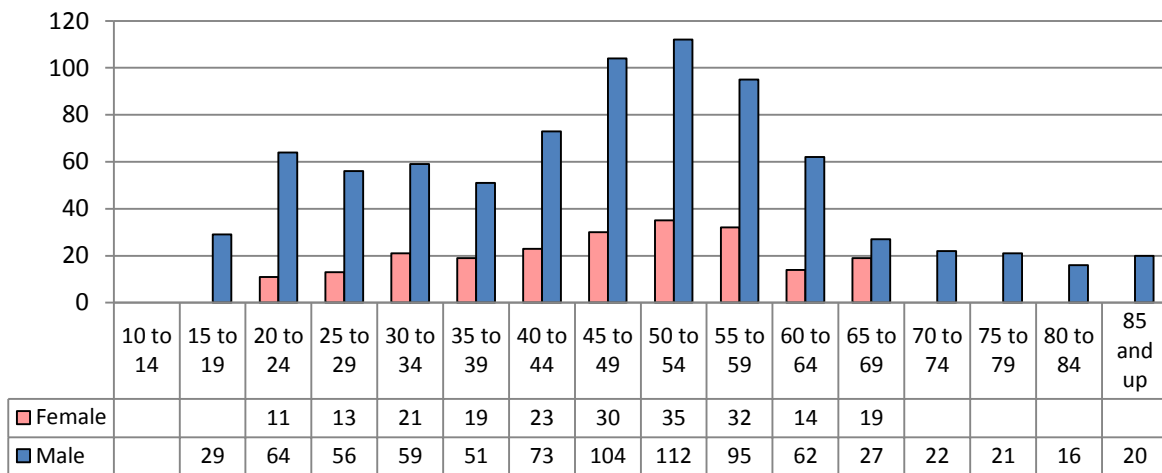
Figure 9 (below) and **Figure 10** (pg. 29), respectively, display NH suicide deaths and suicide death rates for all ages by age groups and gender from 2011-2015. Rates are expressed as the number of suicide deaths per 100,000 people. Displayed together, these charts reveal how death rates correct for differences in the size of each age group. While the highest number of suicide deaths occur in the 40 and 50 year-old age groups, the highest rates, or those at the greatest risk, are males over the age of 85. This is followed by males between the ages of 45 and 59. This second high risk group is younger than has been seen in past years, where individuals in their 70's generally exhibited higher rates of suicide than individuals in their 40's and 50's.

Figure 9

The highest numbers of suicides deaths are seen in males and females in the 40 and 50 year-old age groups.

**New Hampshire Resident Suicide Deaths by Age Group,
2011-2015**

Data Source: CDC WISQARS*



*Note: Beginning with 2008 data, the CDC has suppressed state-level counts/rates for categories with fewer than ten deaths

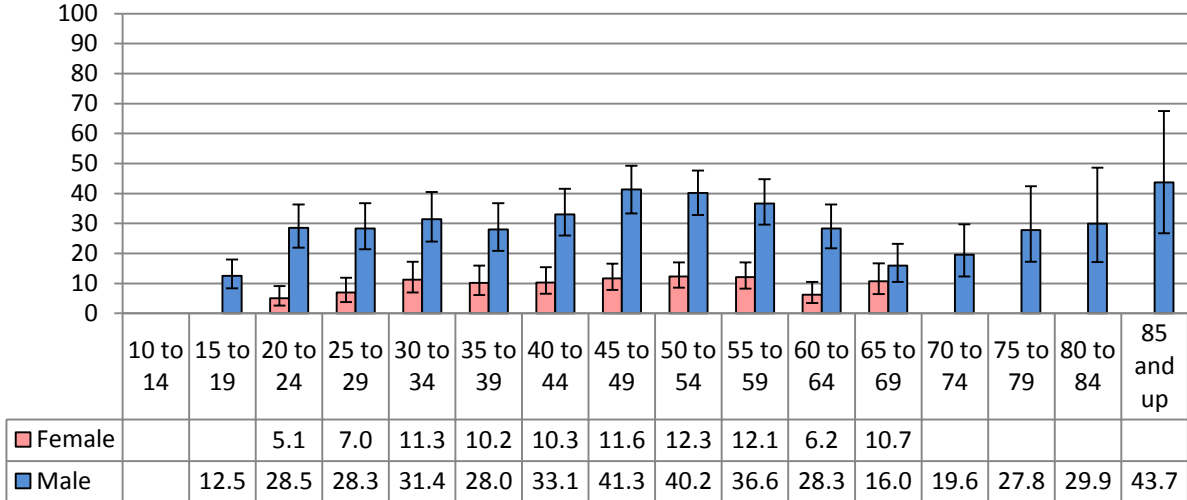
Suicide death rates are also important in determining vulnerable age groups and age-related transitions. The suicide death rate in males rises rapidly from ages 10-14 to 15-19 and then again from ages 15-19 to 20-24, pointing to a rise in vulnerability during the transitions from early adolescence to middle adolescence and then middle adolescence to late adolescence/early adulthood. Similarly, suicide rates among elderly males increase substantially at 85 years compared to the younger age groups, indicating another vulnerable time of life for men. As mentioned above there has been a recent increase in the suicide rates among individuals between the ages of 45 and 59. This may indicate an additional transition period where individuals are more vulnerable.

Figure 10

Male NH residents over age 85 have the highest rate of suicide deaths, and male youth transition periods see the most significant changes in suicide rates, between ages 10-14 to 15-19.

**New Hampshire Resident Suicide Death Rates (per 100,000)
By Age Group, 2011-2015**

Data Source: CDC WISQARS*



*Note: Beginning with 2008 data, the CDC has suppressed state-level counts and rates for categories with fewer than ten deaths

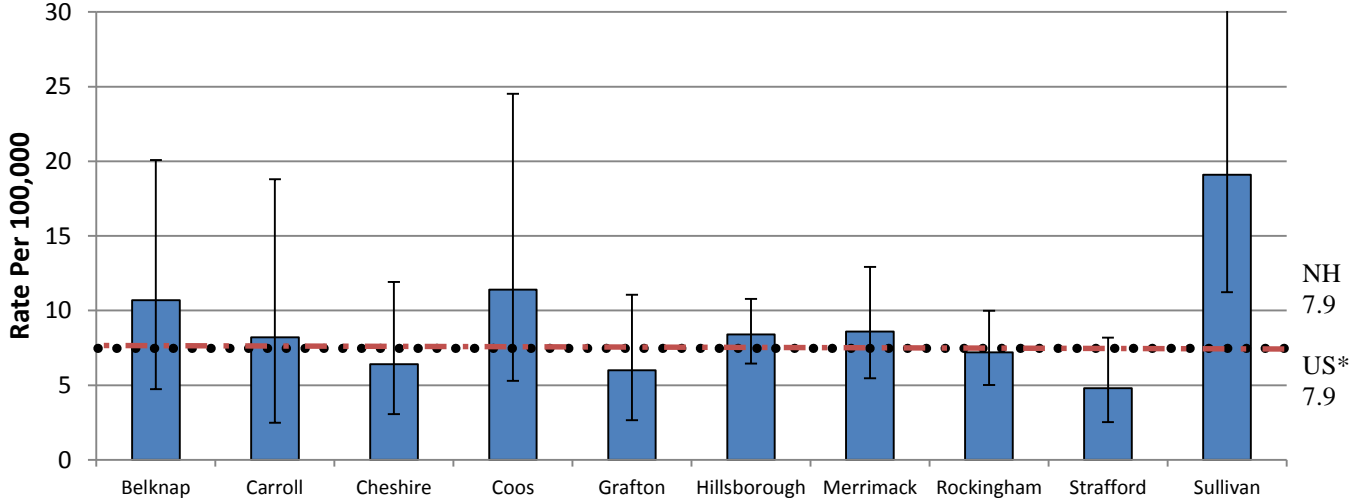
Geographic Distribution of Suicide in NH

The numbers and rates of suicide in NH are not evenly distributed throughout the state. **Figure 11** (pg. 30) shows youth and young adult suicide rates by county in NH. **Figure 12** (pg. 30) presents this data for NH residents of all ages. The county suicide death rate chart indicates geographical locations that may be particularly vulnerable to suicide (youth and young adult and/or all ages). Due to small numbers, most of these differences are not statistically significant. However, Carroll County (Carroll County all ages rate: 18.9 per 100,000) and Coos County (Coos County all ages rate: 19.7) did have significantly higher all ages suicide rates than Rockingham County (all ages rate: 11.6 per 100,000), as well as being significantly above the NH US rates (NH, all ages rate: 14.4 per 100,000; US all ages rate: 12.5 per 100,000). For youth and young adults, the rate for Sullivan County (19.1 per 100,000) was significantly above the rates for Grafton County (6.0 per 100,000), Rockingham County (7.2 per 100,000), and Strafford County (4.8 per 100,000), as well as being above the NH and US rates of 7.9 per 100,000. County limits are neither soundproof nor absolute. A suicide that occurs in one county can have a strong effect on neighboring counties, as well as across the state, due to the mobility of residents. **Figure 13** (pg. 31) presents the suicide rates for all ages from 2007 to 2016 as a NH map broken down by county.

Figure 11

New Hampshire Youth Suicide Crude Death Rates by County
Ages 10-24 2007-2016

Data Source: Office of Chief Medical Examiner, NH



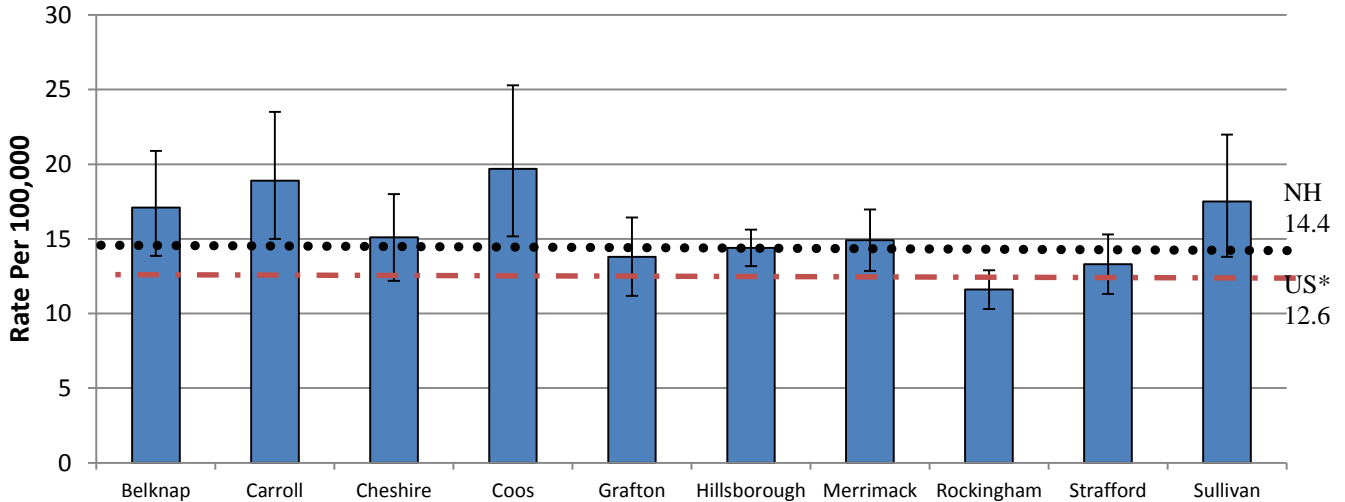
*US Rate is only through 2015

Source: CDC WISQARS

Figure 12

New Hampshire Resident Suicide Crude Death Rates by County
All Ages 2007-2016

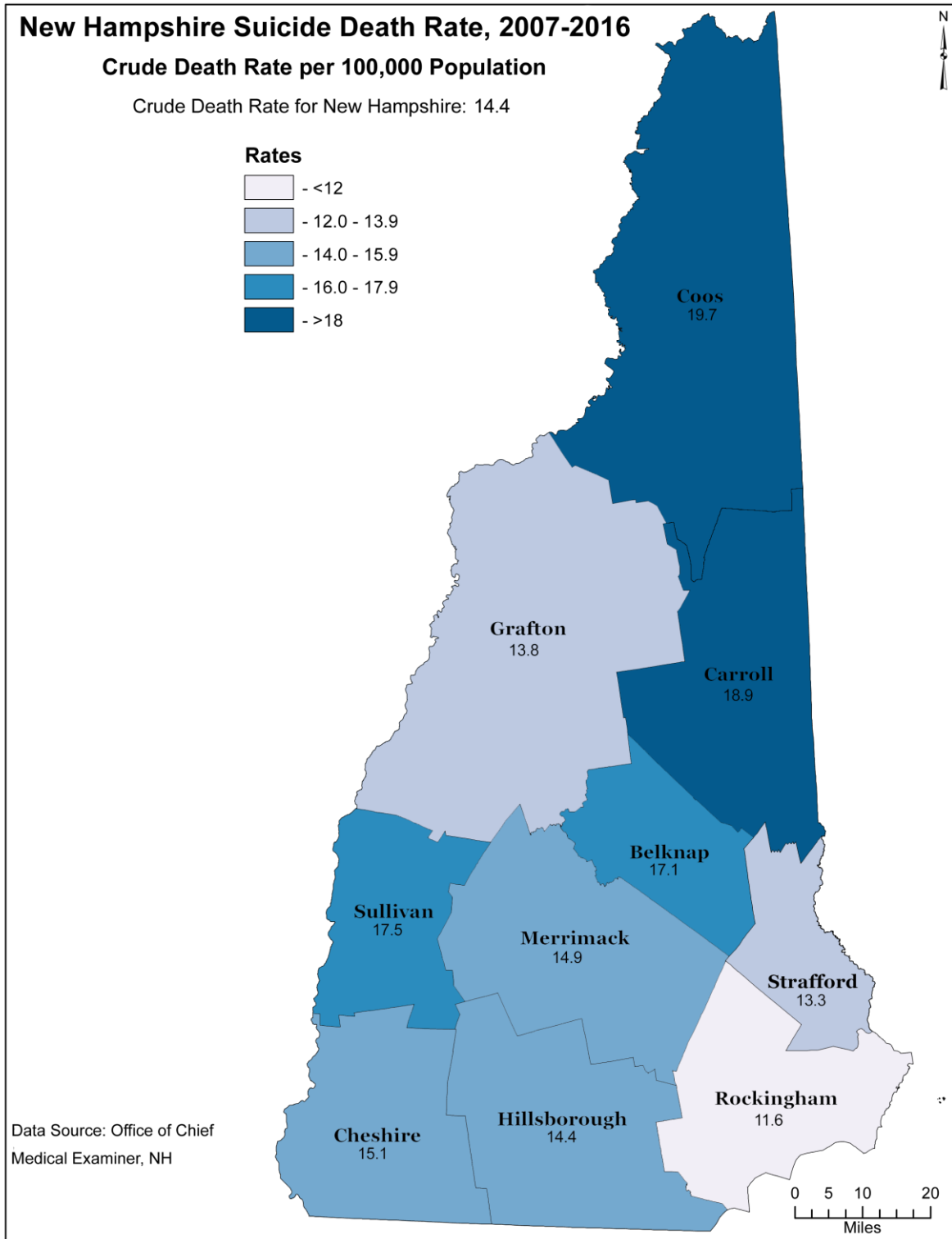
Data Source: Office of Chief Medical Examiner, NH



*US Rate is only through 2015

Source: CDC WISQARS

Figure 13
Map of NH suicide death rates



Suicide Behavior in NH: Gender Differences - Attempts and Deaths

Youth and Gender

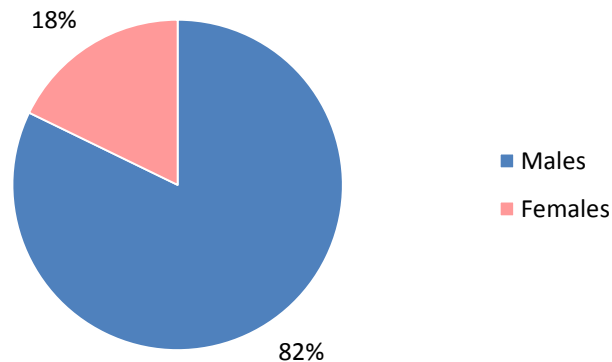
While males represent over 80% of the youth and young adult suicides from 2011-2015, the fact that males *die* by suicide at a higher rate than females may largely be due to males using more lethal means. See **Figures 14** (below) and **15** (pg. 33). In fact, females *attempt* suicide at a higher rate than males. When examining how many NH youth and young adults ages 15-24 were hospitalized and then discharged for self-inflicted injuries in 2012-2014, it is shown that 65% of the 430 inpatient discharges represent females, while only 35% represent males. Likewise, the 2015 NH Youth Risk Behavior Survey (YRBS) reports approximately 1.9 times as many female youth attempt suicide as males each year (8.9 % of females and 4.6% of males). Emergency department (ED/ambulatory) data reveals a similar gender ratio, based on self-inflicted injury rates.⁵

Figure 14

Over five times as many male NH residents ages 10-24 died by suicide 2011-2015.

NH Resident Suicide Deaths by Gender 2011-2015, Ages 10-24, N=118

Data Source: CDC WISQARS



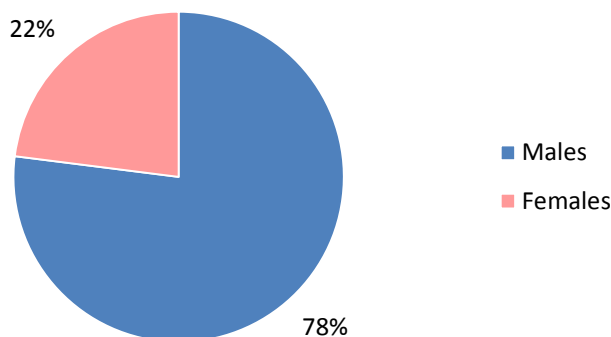
⁵ Classifying an injury as self-inflicted is another way of stating that the injury was an instance of deliberate self-harm. Not all self-inflicted injuries necessarily represent suicide attempts. However, analysis of these injuries is the best currently available proxy for estimating suicide attempts.

Figure 15

Three times more male than female NH residents of all ages died by suicide 2011-2015.

NH Resident Suicide Deaths by Gender 2011-2015, All Ages, N=1,060

Data Source: CDC WISQARS



Female youth are less likely to die by suicide, possibly resulting from less severe injuries during suicide attempts (self-inflicted injuries). However, females do make a greater number of attempts than males – 1.2-1.6 times as often (**Figure 16, Figure 17, and Figure 18** – pgs. 34-35). This report refers to three types of data; Emergency Department Discharges, Inpatient Discharges, and individuals treated/transported by Emergency Medical Services (EMS). Emergency Department (ED) data includes patients who came to the ED and stayed at the hospital for less than 24 hours (also called Ambulatory Discharges). Inpatient data refers to patients who were admitted to the hospital for more than 24 hours. If a patient goes to an ED and is admitted for inpatient services, they are removed from count in the ED data and listed as inpatients. The hospital discharge data records the number of hospital visits, not the number of individual persons who went to the hospital for care. For example, if one patient went to the hospital three different times it would

Quick Facts/Talking Points

- Males in NH die by suicide at a rate that is nearly four times the rate for females (CDC WISQARS, 2015).
- Although males are more likely than females to die by suicide, females report attempting suicide at nearly twice the rate of males (NH YRBS, 2015)
- Over $\frac{3}{4}$ of NH adults report that they feel suicide is preventable (2012 Granite State Poll - UNH Survey Center)

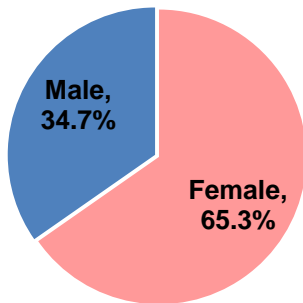
be counted as the same number of visits as three different patients who went to the hospital one time each over the course of one calendar year.

The EMS data presents the number of times individuals were treated and/or transported by an EMS provider where the individual had some type of self-inflicted injury. As with the hospital data, the EMS data looks at the number of visits/incidents, not unique individuals. The EMS data comes from a different source than the hospital data. Therefore, the cases are not de-duplicated between the two datasets (i.e., an individual may be counted in the hospital and EMS datasets for the same incident). The cases included in the EMS dataset are ones where the intent of the injury was listed as “self-inflicted”. This does not include incidents where an injury was deemed to be accidental.

Figure 16

A greater percentage of female than male NH residents attempted suicide, as seen in inpatient self-inflicted injuries 2012-2014.

NH Resident Inpatient Discharges for Self-Inflicted Injuries, by Gender, Ages 15-24 Years, 2012-2014
Data Source: Injury Surveillance Program, NH DHHS
N=430



NH Resident Emergency Department Discharges for Self-Inflicted Injuries, by Gender, Ages 15-24 Years, 2012-2014
Data Source: Injury Surveillance Program, NH DHHS
N=2418

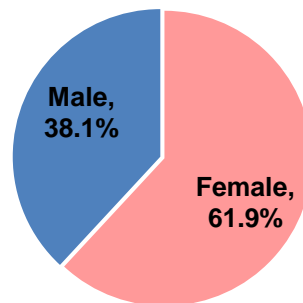
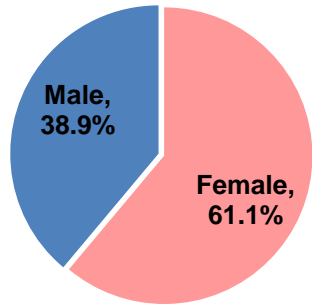


Figure 17

A greater percentage of female than male NH residents attempted suicide, as seen in ambulatory self-inflicted injuries 2012-2014.

NH Resident Inpatient Discharges for Self-Inflicted Injuries, by Gender, All Ages, 2012-2014
Data Source: Injury Surveillance Program, NH DHHS
N=2161



NH Resident Emergency Department Discharges for Self-Inflicted Injuries, by Gender, All Ages, 2012-2014
Data Source: Injury Surveillance Program, NH DHHS
N=6085

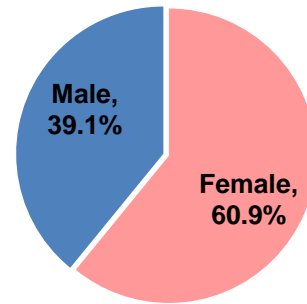
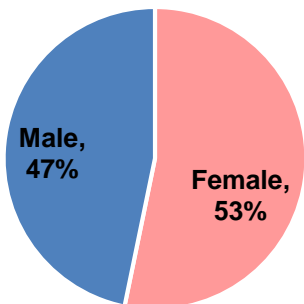


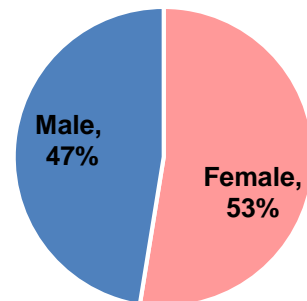
Figure 18

A greater percentage of female than male NH residents attempted suicide, as seen by self-inflicted injuries treated by Emergency Medical Services self-inflicted injuries 2007-2016.

Self-Harm by Gender Ages 10-24, 2007-2016
New Hampshire Department of Safety, Division of Fire Standards and Training and Emergency Medical Services
N=2273



Self-Harm by Gender All Ages, 2007-2016
New Hampshire Department of Safety, Division of Fire Standards and Training and Emergency Medical Services
N=6235



Gender differences exist not only for suicide attempts and deaths, but also for help-seeking behavior. It has been estimated that as many as 90% of individuals who take their own life had a diagnosable mental illness; the most common diagnoses being depression and substance abuse

disorders⁶. Yet a much smaller percentage were receiving treatment. In NH, over 40,000 people received treatment at one of the state's ten Community Mental Health Centers (CMHC)⁷ each year. In 2016, this works out to approximately 1 out of every 33 residents in the state. Of those individuals in treatment, approximately 55% of them were female and 45% were male. This is illustrated in **Figure 19** (pg. 37). Without additional data it is not possible to say how these numbers relate to the connection between these treatment figures and the greater number of suicide deaths among males and/or the greater number of suicide attempts reported among females.

Positive Outcomes and Testimonials

Suicide is preventable with the understanding we all must embrace:
“treatment works”.

Support and early intervention is everyone's job, as saving a life
makes a world of difference for so many.

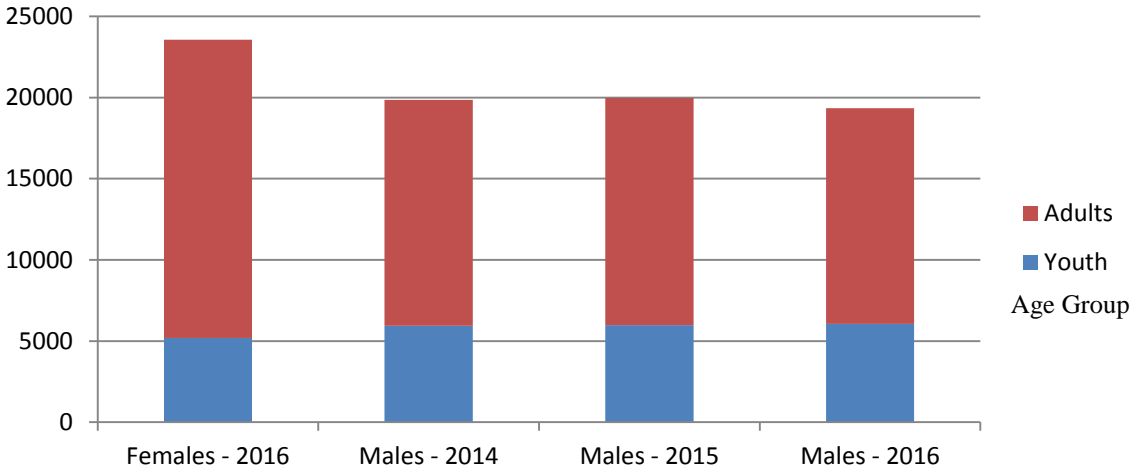
Maggie Pritchard
Executive Director, Genesis Behavioral Health
Vice-Chair, NH Suicide Prevention Council

⁶ Conwell Y, Brent D. Suicide and aging I: patterns of psychiatric diagnosis. *International Psychogeriatrics*, 1995; 7(2): 149-64.

⁷ Community Mental Health Centers are private not-for-profit agencies that have contracted with the NH Department of Health and Human Services, Bureau of Behavioral Health, to provide publicly funded mental health services to individuals and families who meet certain criteria for services. More information on the centers is available from <http://www.dhhs.state.nh.us/dcbcs/bbh/centers.htm>

Figure 19
Individuals receiving treatment for depression at NH Community Mental Health Centers presented by age and gender.

Individuals in Treatment at NH CMHC's
2014-2016 - Presented By Age Group and Gender
Data Source: NH Bureau of Behavioral Health



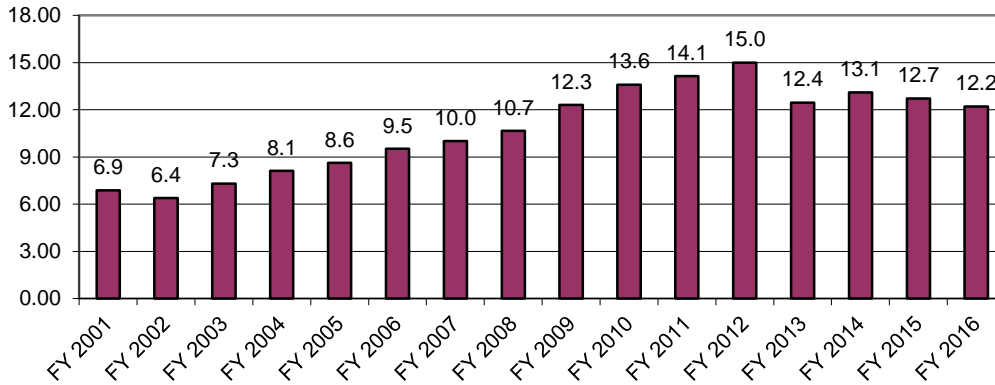
Patients that cannot be treated in an outpatient setting, such as involuntary admissions due to potential suicide risk, will generally be admitted to New Hampshire Hospital, the NH state psychiatric hospital. In an average year there are approximately 2,069 admissions to New Hampshire Hospital (estimates based on New Hampshire Hospital admissions for fiscal years 2012 - 2016⁸). The gender differences for individuals receiving treatment at New Hampshire Hospital are much smaller than for those receiving treatment for depression through the CMHCs. The admissions are approximately an even split between females and males. Although the number of admissions were comparable for males and females, this does not guarantee that severity of the cases were similar or that the lengths of stay were similar. **Figure 20** (pg. 38) presents the number of admissions per bed at New Hampshire Hospital. The increase over time on this chart has been due to both an increase in the number of admissions at the hospital (from 1460 admissions in fiscal year 2001 to 1930 admissions in fiscal year 2016), and a decrease in the number of available beds (from 212 beds in fiscal year 2001 to 158 beds beginning in fiscal 2012).

⁸ The NH State Fiscal Year runs from July 1st of one calendar year through June 30th of the following calendar year (e.g., fiscal year 2016 ran from July 1st 2015 through June 30th 2016).

Figure 20

The number of admissions per bed at New Hampshire Hospital have doubled since 2001.

**New Hampshire Hospital: Number of Admissions
Per Hospital Bed By Fiscal Year**
Source: New Hampshire Hospital



Age, Gender and Self-inflicted Injury

When the rates from 2012-2014 for NH resident inpatient hospitalizations/discharges and emergency department use for self-inflicted injuries are examined by gender and age group, the variability can be seen (**Figures 21 and 22** – pg. 39). As above, these data refer to number of visits; therefore, individuals may be counted more than once if they were admitted or seen more than once during the year.

Female NH residents have a higher overall rate of inpatient hospitalizations/discharges for self-inflicted injuries, yet for ages 80 and up the rates are nearly identical. For females aged 35-34, the rate of those being discharged from inpatient care (**Figure 21** pg. 39) is 110/100,000, nearly two times the rate for males of the same age. The peak age for males is between 35 and 44 for self-inflicted injuries requiring hospitalizations. Again, ED usage rates, depicted in **Figure 22** (pg. 39), point to females aged 15-24 as a population particularly vulnerable to self-injury and/or suicide attempts, with females in this group exhibiting a rate over 569/100,000, about 51 times the suicide death rate for this population. Males also peak in self-injury around this age group with the male rates for ages 15 to 24 being over 335/100,000. Although male rates peak around this age group, their rates are much lower than those for females. Also of note, the total number of youth and young adult (ages 15-24) ED visits (2418) is 5.6 times greater than the number of inpatient discharges for this population. Since less severe injuries are more common among self-inflicted youth injuries, there are many more attempts than deaths. This data reinforces that the transition from middle adolescence to late adolescence/early adulthood is a time of great risk for suicidal thinking, self-harm and suicide attempts. EMS data (**Figure 23** pg. 40), which includes individuals treated and/or transported by Emergency Medical Services for a self-inflicted injury, presents a similar picture to the hospital data. Females age 15 to 24 present the highest rates of self-inflicted injuries, and female rates are generally higher for other age groups. A difference

seen in this dataset is that males age 85 present the next highest rate. This high male rate is part of an overall increase seen for adults over the age of 65 in this dataset.

Figure 21

NH female residents ages 15-24 and 25-34 show the highest rates of suicide attempts, higher than males of any age group.

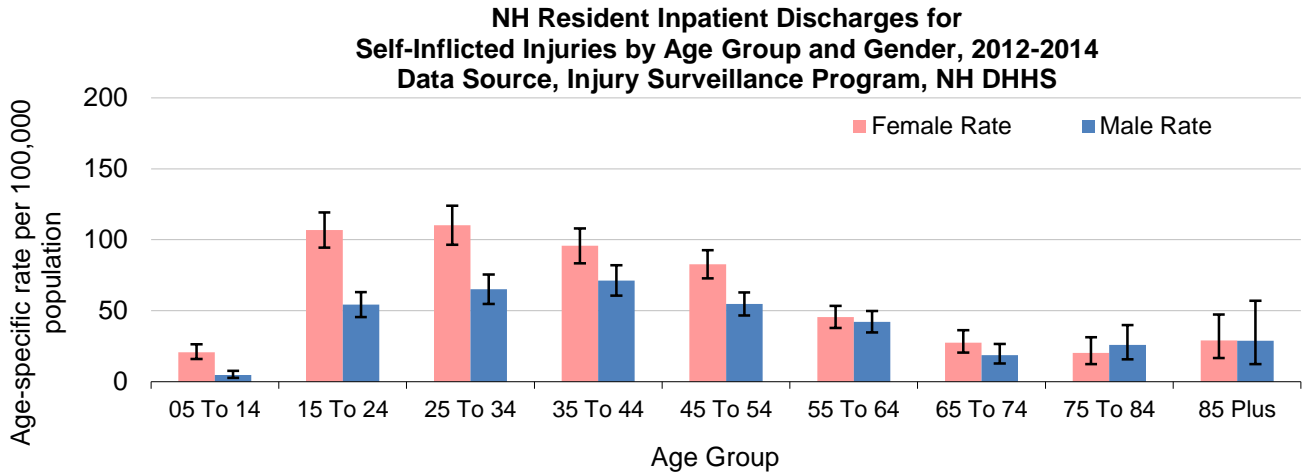


Figure 22

NH female residents ages 25-34 show the highest rates of suicide attempts, but male rates also peak at this age.

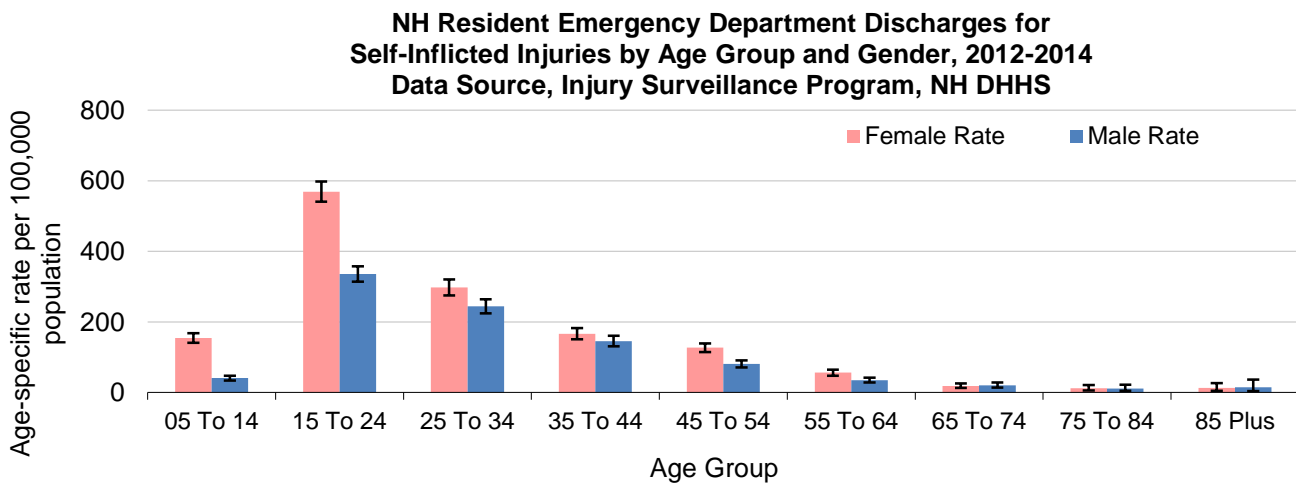
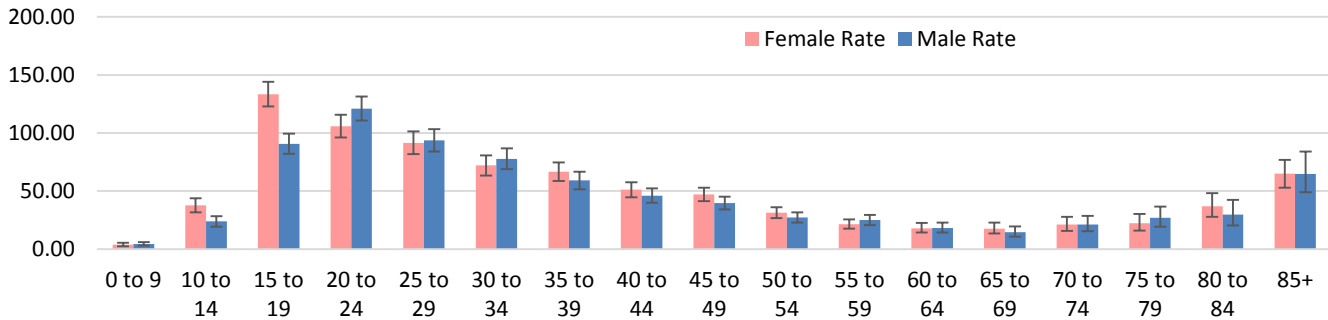


Figure 23

NH female residents ages 15-24 show the highest rates of suicide attempts followed closely by male rates for residents age 85 and over.

**EMS Data Self-Harm Treatment/Transportation Rates by Age Group and Gender
2007-2016**

**Data Source: New Hampshire Department of Safety, Division of Fire Standards and Training and
Emergency Medical Services**



According to inpatient admissions/discharges and ED/ambulatory use data across all ages in NH, there are approximately 13 suicide attempts for every suicide death. This number does not include attempts that go unreported, unrecognized, or without a hospital or ED visit which required medical intervention. Further, the rates of attempts for young people and females create an even greater ratio of suicide attempts to deaths. Based solely on hospital and emergency department self-injury data, it is estimated that over 1,190 youth and young adults (age 24 and under) attempt suicide each year in NH.

In contrast to the above data, which are based on cases where medical intervention is required, the results of the YRBS presents data collected from high school aged youth by self-report. In 2015, nearly 7 percent of high school students completing the YRBS reported having attempted suicide at least one time over the previous year. Based on the YRBS figures, this works out to over 3,900 high school age youth in NH who may attempt suicide each year. The YRBS reports may account for attempts not included in hospital self-injury data. This could be the case for any attempts with relatively non-lethal means where medical assistance was not sought. Of particular concern for this data is the likelihood that in many of these cases, the youth have never sought help or disclosed the attempt to any adult. It is also possible that self-reports exaggerate the incidence of suicide attempts among high school age youth.

While the great majority of self-inflicted injuries⁹ are not fatal, because of the larger incidence they directly and indirectly affect a greater number of people than do fatalities. A significant risk factor for suicide is a previous attempt: in one study 21-33% of people who die by suicide have made a previous attempt (Shaffer & Gould, 1987). Therefore, any suicide attempt, regardless of its lethality, must be taken seriously. If not addressed, it could lead to additional attempts; therefore, once an individual has made an attempt, secondary prevention is necessary.

⁹ Classifying an injury as self-inflicted is another way of stating that the injury was an instance of deliberate self-harm. Not all self-inflicted injuries necessarily represent suicide attempts. Analysis of these injuries, however, is the best currently available proxy for approximating suicide attempts.

Suicide in NH: Methods

The gender difference in suicide deaths/attempts may be explained in part by the fact that males, in general, use more lethal means. Of NH male youth and young adults who died by suicide between 2011 and 2015, 55% used firearms compared to 19% of females (**Figure 24** – pg. 42). This gender disparity in firearm use persists as residents enter their late 20's, 30's, and 40's with the proportion of male and female deaths from firearms decreasing equally for both genders. The proportion of firearm deaths increases sharply at age 75 for males, with more than 80% of the suicide deaths in that age group involving a firearm.

Suicide attempt methods have varying lethality. **Figure 25** (pg. 42) compares firearms, hanging, poisoning, and cutting/piercing in terms of the percentage of various outcomes (emergency department visit, inpatient

admission, or death) for each method. Approximately 80% of self-injuries using a firearm result in death. Among youth and young adults, suicide is often a highly impulsive act and poor impulse control is one of the risk factors for suicide. Therefore, intervention efforts that reduce access to firearms and other highly lethal means may be effective to reduce suicide among those at risk for suicide. Particularly for those who are more likely to be impulsive. Firearms remain the most commonly used method of suicide throughout the lifespan in NH. **Figure 26** (pg. 43) indicates that self-inflicted cut/pierce injuries are treated/transported by EMS at more than twice the rate of any other mechanism. Hospital data (**Figure 25** pg. 42) does not show this same proportion of cut/pierce injuries indicating that EMS providers may treat self-inflicted cut/pierce injuries without need to transport the individual to a hospital, or that individuals are more likely to contact EMS for a cut/pierce injury and be transported to a hospital by other means for things such as a poisoning. It may also indicate that EMS providers are more likely to report that a cut/pierce injury as being self-inflicted than they are with other injury types. The use of suffocation as a suicide method peaks in early adolescence, and decreases steadily throughout the lifespan (**Figure 27** – pg. 43).

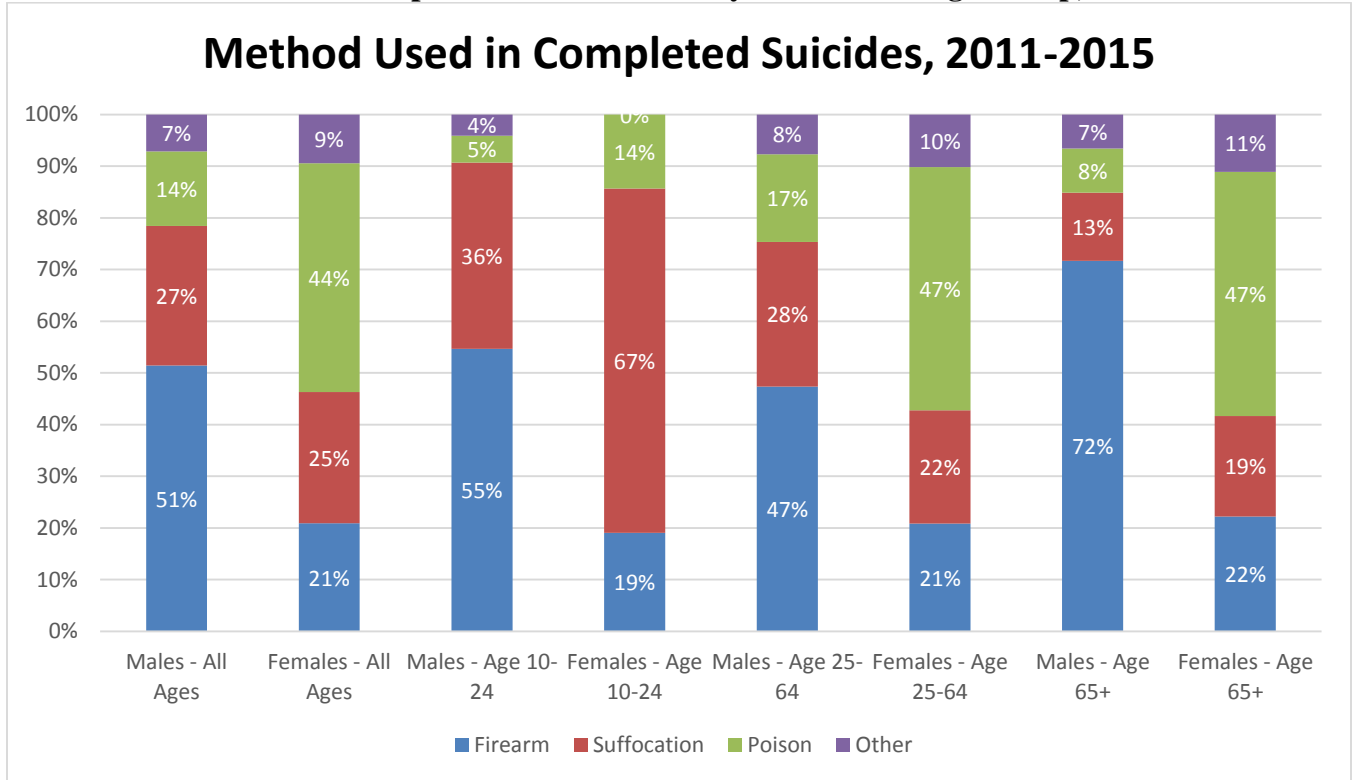
Positive Outcomes and Testimonials

I am a business owner and mom who cares about people and the community where I live. I became a *Connect* Trainer to help people in my community know when someone needs help and know what to do. When I lead a *Connect* Suicide Prevention Seminar I have to make sure that I'm mentally prepared because I don't know who will be attending or what their experience is with suicide or mental illness. Afterwards, I feel pretty good. Seminar participants contact me and tell me about something that happened the next day that they might not have noticed or not known what to say, but now they did. Wow, maybe I did make a difference in someone's life!

Sharon Eng: Parent, Business Owner, and Rotary Member

Figure 24

Variation in Method of Completed Suicide Deaths by Gender and Age Group, 2011-2015.



Data Source: CDC WISQARS

Figure 25

Count of Lethality of Means Used for Suicidal Behavior in NH, 2012-2014

Data Source: Injury Surveillance Program, NH DHHS

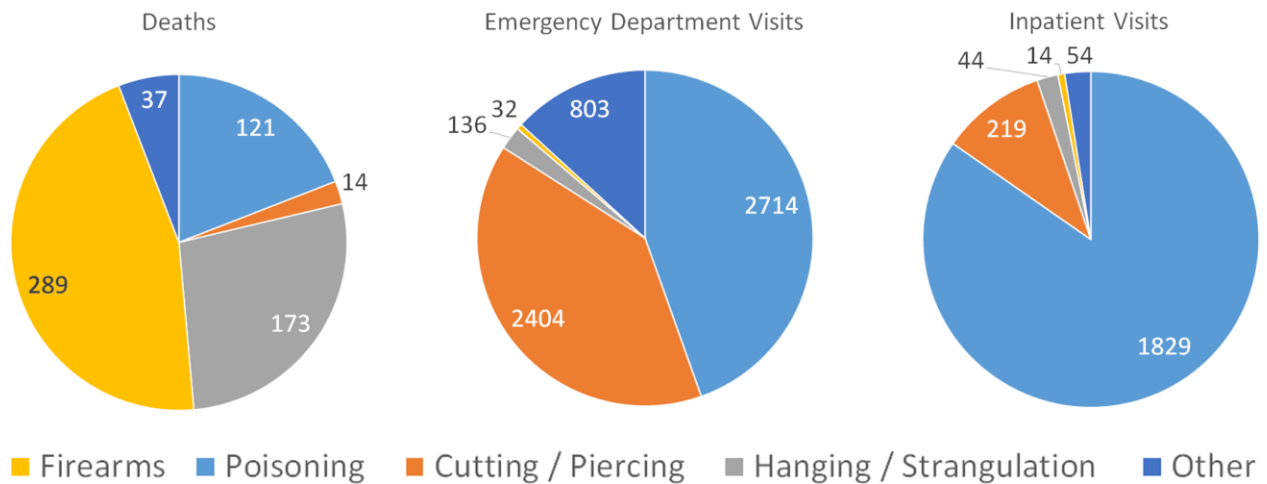


Figure 26

Percent of method of self-inflicted injuries treated/transported by EMS from 2007-2016.

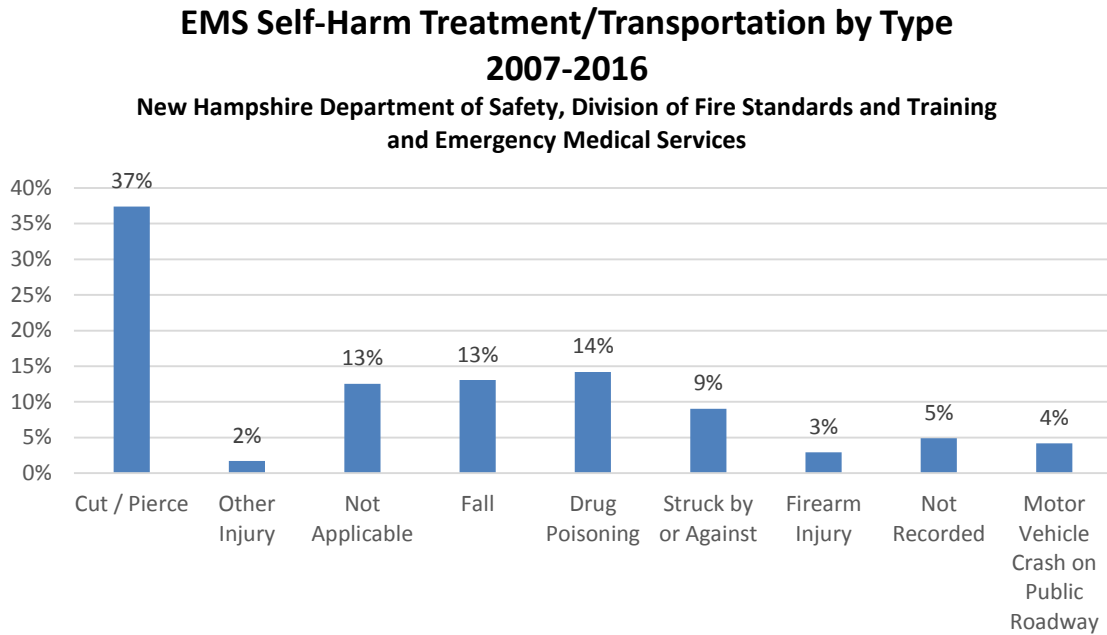


Figure 27

Suicide methods used in NH vary by age group, as seen in 2011-2015.

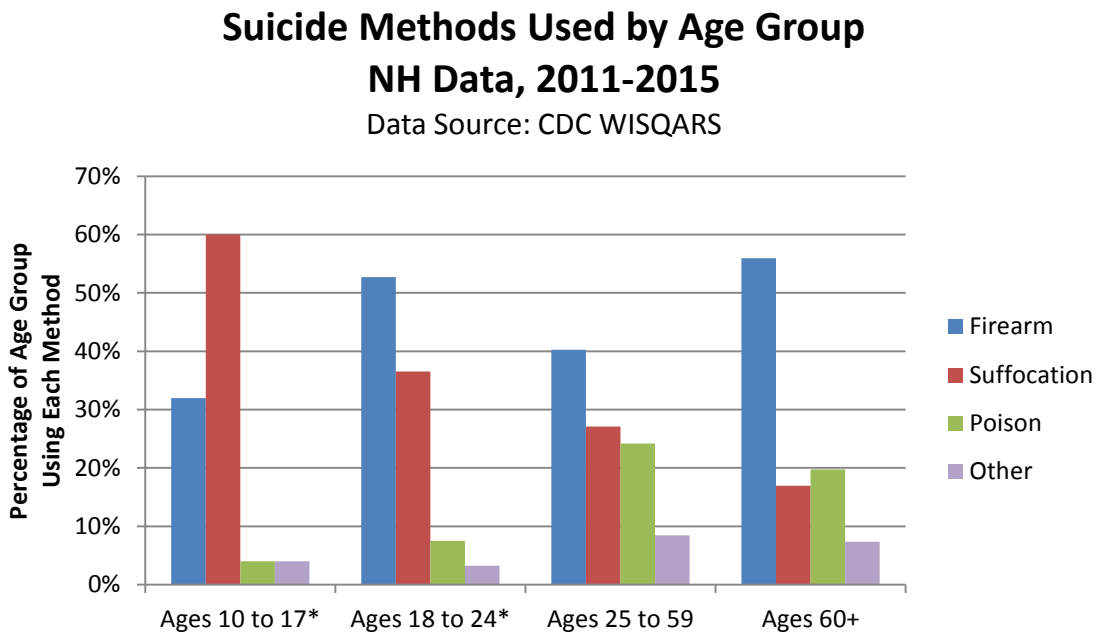
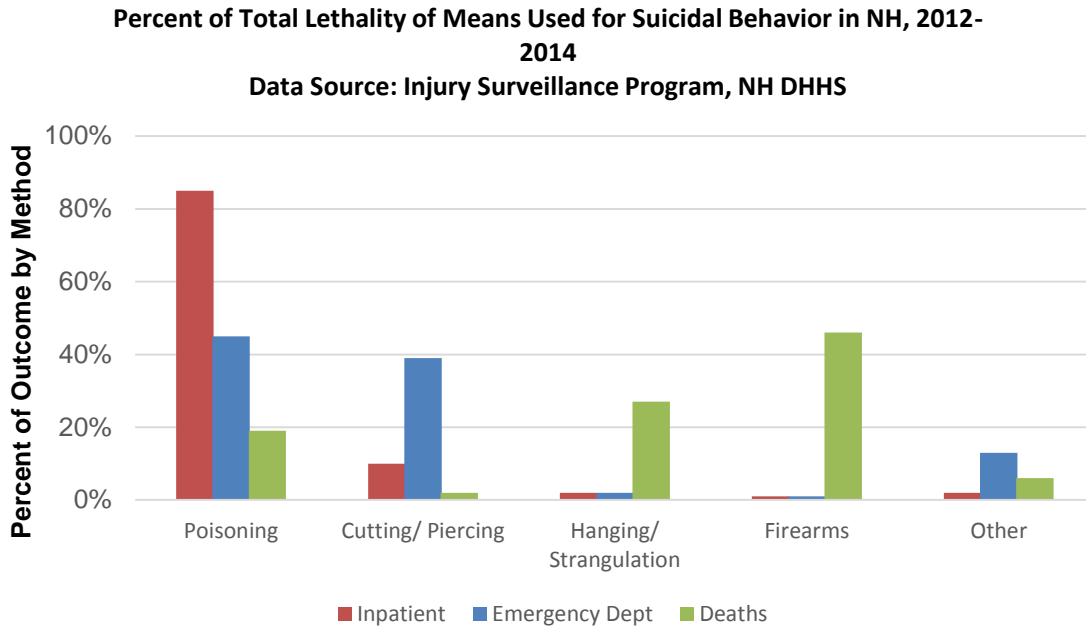


Figure 28
Poisoning is the most frequent method of suicide attempt,
as seen in hospital discharge data 2012-2014.

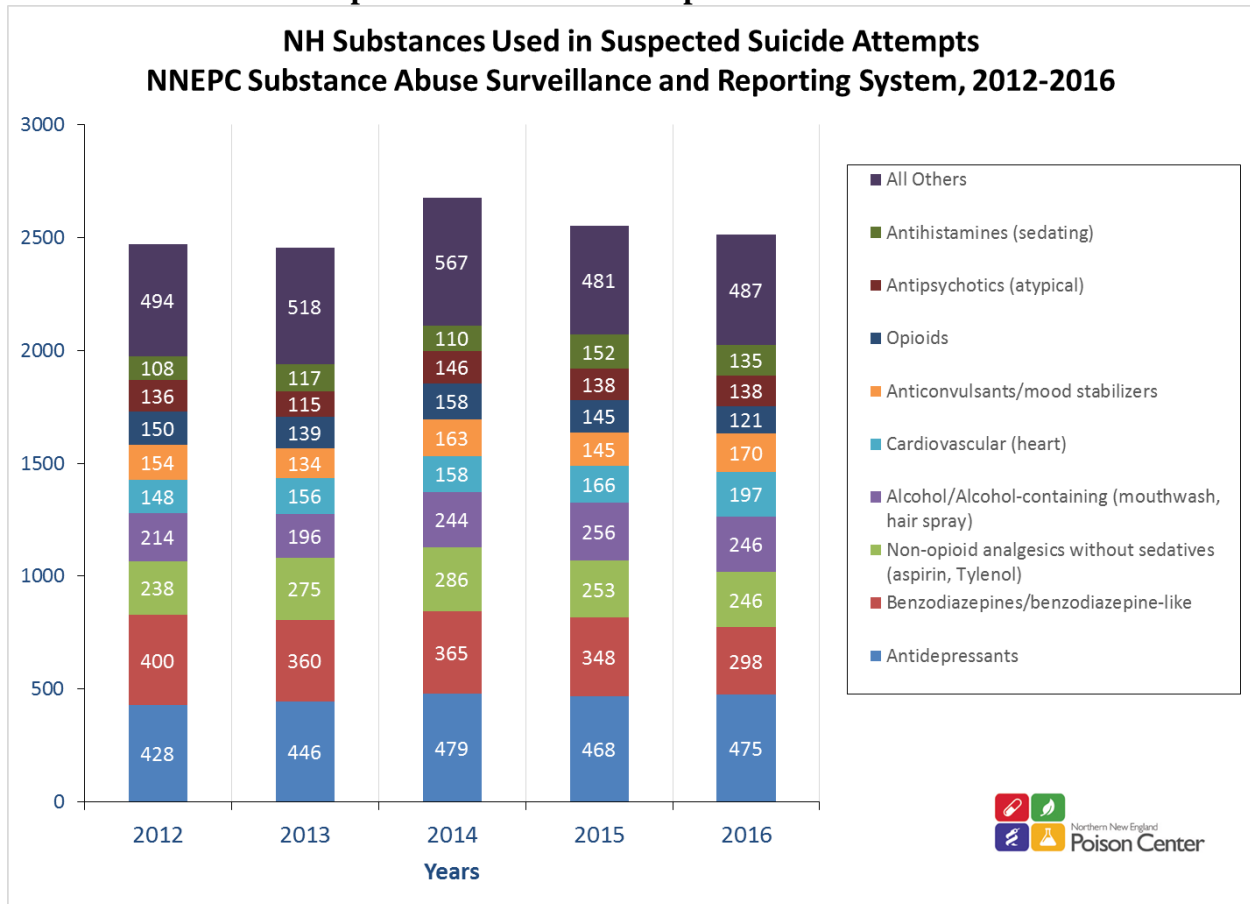


Although suicide attempts employing poison do not account for as many deaths in NH as firearms or hangings, intentional poisonings account for the overwhelming majority of inpatient and ED admissions for suicide attempts (**Figure 28** above). **Figure 29** (pg. 45) depicts the prevalence of the most common substances used in suspected suicide attempts in NH as collected by the NNEPC. The top two from 2012 through 2016 have been Antidepressants and Benzodiazepines.¹⁰ A recent trend noted by the NNEPC is an increase in the use of cardiovascular medications which can have severe clinical effects.

¹⁰ The suspected suicide attempt cases presented were determined by self-report or the report of an individual acting on behalf of the patient (e.g., a health care professional), or a NNEPC staff assessment.

Figure 29

Antidepressants and Benzodiazepines have been the top substances used in suspected NH suicide attempts from 2012-2016.



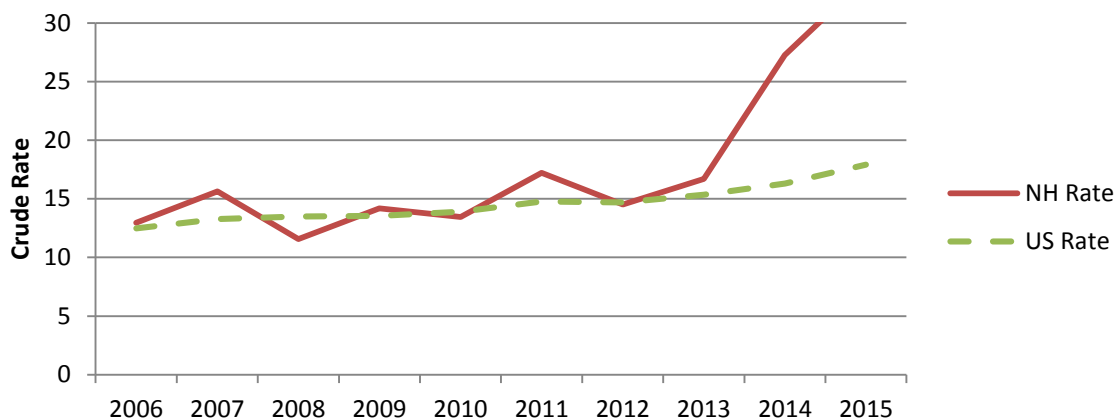
Increasing Accidental Poisoning and Drug-Related Death Rates – Cause for Concern

As seen in **Figure 30** (pg. 46), the accidental poisoning and drug-related death rates in NH and the US as a whole have steadily increased from 2006 to 2015. During this time the US rate has increased by nearly 45 percent while the NH rate has increased more than 160 percent. Although it is not possible to determine an exact number, it is likely that these accidental poisoning and drug-related deaths include suicide deaths where there was not enough evidence for the Medical Examiner to classify them as such. This trend is a cause for concern as both a potential increase in poisoning and drug-related suicide deaths, and as a potential indicator of increased risk taking behavior.

Figure 30

Poisoning/Drug-related death rates in NH increase by more than 160% from 2006 to 2015.

Poisoning/Overdose Death Rates 2006 - 2015



Data Source: CDC WISQARS

Reducing Access to Lethal Means

Positive Outcomes and Testimonials

"A number of lives have been undoubtedly saved since we integrated the CALM training into our structured interview. Now, not a day goes by in the Concord Hospital Emergency Department where we are not counseling patients and family members around the danger of access to firearms and other means of self-harm for people experiencing depression."

Karl Boisvert, LMHC
Director, Emergency Services
Riverbend Acute Care Services

Reducing access to lethal means is part of many suicide prevention goals and protocols, including the National Strategy for Suicide Prevention, NH's Suicide Prevention Plan, the Gun Shop Project, *Connect* and CALM. While it has not been conclusively demonstrated that the efforts being undertaken in NH and nationally to reduce access to lethal means are responsible for the reductions in suicides using firearms. These reductions suggest that when access

to a highly lethal means is reduced, there is little "means substitution" (seeking a different method of suicide). Means reduction may be an effective part of a comprehensive suicide prevention strategy.

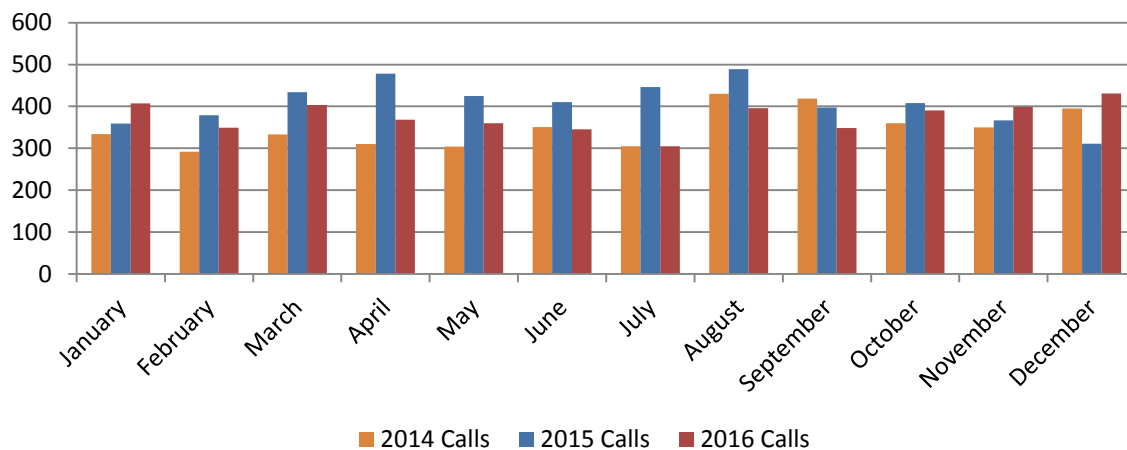
Linking At-Risk Individuals with Help

Crisis lines, such as the National Suicide Prevention Lifeline (NSPL) are vital to suicide prevention efforts in NH and nationally. In 2016, there were 2,306,292 calls made to the NSPL. 4,501 of these calls, or roughly 375 per month were received by the NH NSPL call center (see **Figure 31** below). These calls indicate that individuals in the state who are at risk for suicide are reaching out for help. The large volume of calls may also indicate decreased stigma around help seeking for mental health and/or suicide.

Figure 31

NH NSPL call center responded to an average of 375 calls per month in 2016.

Calls Volume for the NH NSPL Call Center 2014-2016



Costs of Suicide and Suicidal Behavior

There were between 30,018 and 40,215 years of potential life lost¹¹ to suicide from 2011-2015 in NH (CDC WISQARS). Suicide's most obvious cost is the loss of individuals and their potential contribution to their loved ones and to society. For each suicide death, there are many survivors of suicide loss (the family and close friends of someone who died by suicide) who are then at higher risk for depression and suicide themselves. In addition, many others are affected, including those who provide emergency care to the victims and others who feel they should have seen the warning signs and prevented the death.

Nationally, suicide attempts treated in emergency departments and hospitals represented an estimated \$3.9 billion in health care costs in 2010. This does not include the costs associated with mental health services on an inpatient or outpatient basis (CDC WISQARS, 2016). In NH,

¹¹ Years of potential life lost (YPLL) is a measure of the extent of premature mortality in a population. This estimate is based on the approximate age at death as well as the number of people who died in that age group in a given year.

suicide deaths where the individual received treatment in a hospital or emergency department and subsequently died resulted in an estimated \$500,000 in medical expenses in 2010 (CDC WISQARS, 2016). Harder to measure is the cost to employers of lower or lost productivity due to suicide attempts or deaths by employees or their loved ones. An estimate provided by the CDC indicates that there is an average work loss cost of \$1.1 million for each suicide death in NH (CDC WISQARS, 2016).

Additional Data Sources

NH Violent Deaths Reporting System (NH-VDRS), 2015 - 2016

This Analysis of Major Stressors and Contributing Factors to Violent Deaths (Suicide) was prepared by Djelloul Fourar-Laïdi, Planning Analyst, NH-VDRS, NH Office of Medical Examiner, NH Department of Justice; Joanne Miles Holmes, Injury Prevention Program Manager, Maternal and Child Health Section, Division of Public Health Services, NH Department of Health and Human Services; and Kim Fallon, Chief Forensic Investigator Office of Chief Medical Examiner, NH Department of Justice.

Since December 2015, NH began a new chapter regarding surveillance about violent deaths. NH partnered with the Center for Disease Control (CDC) to manage the classification and measurement of violent death surveillance data.

The definition of violent deaths is based on World Health Organization's criteria and that of CDC. In essence, we consider the violent manner of death classification as the following: suicide, homicide, deaths from legal intervention (a subtype of homicide where the victim is killed by or died as a result of law enforcement acting in the line of duty), deaths of undetermined intent, and unintentional firearm fatalities, according to the parameter set forth in the CDC surveillance guidelines.

The vision for NH-VDRS, as well as other state's VDRS programs, is primarily to inform stakeholders engaged in violent deaths prevention. Furthermore, NH-VDRS is engaged in outreach to state wide prevention programs by providing accurate, timely data and comprehensive analysis regarding violent deaths.

NH-VDRS data is the result of in-depth data compilation from primary sources: Vital Records, Toxicology Reports, Medical Examiner Autopsy Reports, Death Scene Investigation reports produced by Assistant Deputy Medical Examiners, Law Enforcement Reports, and occasionally victim's Medical Records or Emergency Department Reports.

Our data is validated and sanctioned by CDC Injury Prevention Division. Our methodology is based on robust verification process, abstraction and re-abstraction procedures as well as quality assurance measures. The data in NH-VDRS abstractions do not contain any personally identifiable information.

In this chapter, we are focusing on the most prevalent stressors that were evident in each death scene investigation, by Medical Examiner and Law Enforcement, of a suicide death. These stressors encompass factors such as: Unemployment (especially when it is chronic), relationships problems, access (or lack of) to primary care for health or mental issues, financial problems, mental illness predisposition (depression, bi-polar, anxiety, etc.), prior suicide attempts and suicide notes left by suicide victims. In conjunction with such stressors, we also added other factors like: access to firearms and opioids. The mix of any of these factors in the abstracted cases resulted in unfortunate suicidal deaths.

Suicides and social stressors:

During the period 2015-2016, there were 450 confirmed suicide deaths, according to death certificate results and certified by the Medical Examiner Office.

One of the most significant factors that the data showed for suicide victims in NH, 2015 to 2016, was a common stressor that everyone experiences, relationship problems. Here, relationships are defined as those relationships between two individuals, regardless of sex, gender and formality. In another words, distinction for relationships is that they're not bound by legal status: i.e. marital status. Furthermore, the **Table 11** is a cross tabulation for suicide victims who committed suicide where the stressor was a troubled relationship. These suicide victims may have reacted to this type of stressor immediately or may have reacted days after, which resulted in their deaths.

**Percentage of Suicide Victims
with Relationship Problems (2015-2016)**

| | |
|--|-----|
| Percent of Victims who had relationship problems (2015-2016) | 30% |
|--|-----|

**Table 11
Percentage of Suicides
with Relationship Problems, by Lethal Means (2015-2016)**

| Cause of Death | % of Suicide Victims w/ relationships Problem |
|----------------------------|--|
| GSW-Head | 13% |
| Asphyxia/Hanging | 12% |
| Overdosing | 3% |
| GSW-Chest | 2% |
| Cutting / Sharp Instrument | < 1% |
| Other Cause of Death | < 1% |
| Jumping From Heights | < 1% |

Suicide and Firearms:

In New Hampshire the majority of suicide tools are handguns. We define handgun as pistols or revolvers. Detailed information regarding the type and caliber of firearms is not standardized; thus the description is consistent and information sources are varied. This makes it difficult to cross walk the data from one source to the other.

Table 12
Rate of Suicide Victims, Who Used Firearms to Take Their Own Lives,
Based on Work Status
In NH, 2015-2016

| | Average Age | Retired | Disabled¹² | Employed | Unemployed¹² | Unknown | Total |
|-------------|--------------------|----------------|------------------------------|-----------------|--------------------------------|----------------|--------------|
| 2015 | 49 | 21% | 2% | 46% | 25% | 7% | 100% |
| 2016 | 50 | 26% | 3% | 46% | 20% | 4% | 100% |

Suicide and Work Status:

When it comes to the social cost for suicides, we used the declared work status on death certificates, which funeral homes collect, and cross referenced it with surveillance data from death scene investigation reports conducted by the Medical Examiner’s Office in NH.

The results are not that surprising nor are they far off the national trends. The data suggests that we are losing about 75% of suicide victims, whose average age is about 49 years, to deaths resulting from acts of firearms used in suicides, during 2015 and 2016.

For suicide victims who used methods that resulted in death of Prescription / Illicit drug overdosing, the average age still hovers around 50 years old. In these circumstances, the prevalence of victims who were unemployed and died as a results of Prescription / Illicit drug overdosing is 30% to above 40% for these victims. The rate in **Table 13** also shows a big contrast to the rates resulting from firearms deaths, during the same period: 2015-2016.

Table 13
Rate of Suicide Victims who used Prescription / Illicit drugs to Commit Suicide, Based on
Work Status
In NH, 2015-2016

| | Average Age | Retired | Disabled¹² | Employed | Unemployed¹¹ | Unknown | Total |
|-------------|--------------------|----------------|------------------------------|-----------------|--------------------------------|----------------|--------------|
| 2015 | 50 | 16% | 12% | 21% | 44% | 7% | 100% |
| 2016 | 54 | 13% | 25% | 25% | 31% | 6% | 100% |

¹² Data related to disabled and unemployed: These suicide victims who are both disabled and unemployed, which are counted only as unemployed.

When it comes to suicide methods of asphyxia / hanging and the victims of such methods the narrative does not change much regarding the average age of these victims; it still averages about 45 years old. These suicide victims are still in their prime years of work productivity.

In these circumstances, the prevalence of victims who were unemployed and died as a results of asphyxia or hanging is about 40%. Again, it is worth contrasting these rates (**Table 14**) to those rates resulting from firearms deaths (**Table 12**), during the same period: 2015-2016.

Table 14
Rate of Suicide Victims who used Asphyxia / Hanging to Commit Suicide,
Based on work status
In NH, 2015-2016

| | Average Age | Retired | Disabled ¹³ | Employed | Unemployed ¹³ | Unknown | Total |
|------|--------------------|---------|------------------------|----------|--------------------------|---------|-------|
| 2015 | 44 | 9% | * | 41% | 41% | 9% | 100% |
| 2016 | 45 | 12% | * | 49% | 31% | 8% | 100% |

Suicide Victims face combined stressors (as in **Table 15** below):

Among suicide victims there are many who experienced financial hardship which may have resulted from a long term spell of unemployment after an accident, layoff from a fading industry job or as a result of bankruptcy. These victims of suicide have not been able to overcome this financial hurdle. What is not clear at this point, did these suicide victims seek assistance and relief for their financial troubles and they were unsuccessful in their quest? Or did they just struggle alone?

Similarly, many of these suicide victims may have had prior suicide attempts. Some of these victims did receive mental health attention. The statistics to account for those who had accessed mental health services are not robust at this stage.

Yet another major stress factor that suicide victims face is alcohol abuse. The range of victims of suicide is varied in scope and depth. There are victims who had abused alcohol since their early teen years and there are other victims who suffered alcohol excesses after other major events in their lives such: loss of loved ones, contentious break-up in relationships or an ailment.

¹³ Data related to disabled and unemployed: These suicide victims who are both disabled and unemployed, which are counted only as unemployed.

Table 15
Rate of Suicide Victims,
Who had Financial Difficulties or Prior Suicide Attempts or Abused Alcohol?
In NH, 2015-2016

| | Financial Problems ¹⁴ | History of Suicide attempt ¹⁴ | Alcohol ¹⁴ |
|------|----------------------------------|--|-----------------------|
| 2015 | 22% | 38% | 24% |
| 2016 | 15% | 26% | 33% |

Lethal means or methods of suicides in New Hampshire for the period: 2015 -2016.

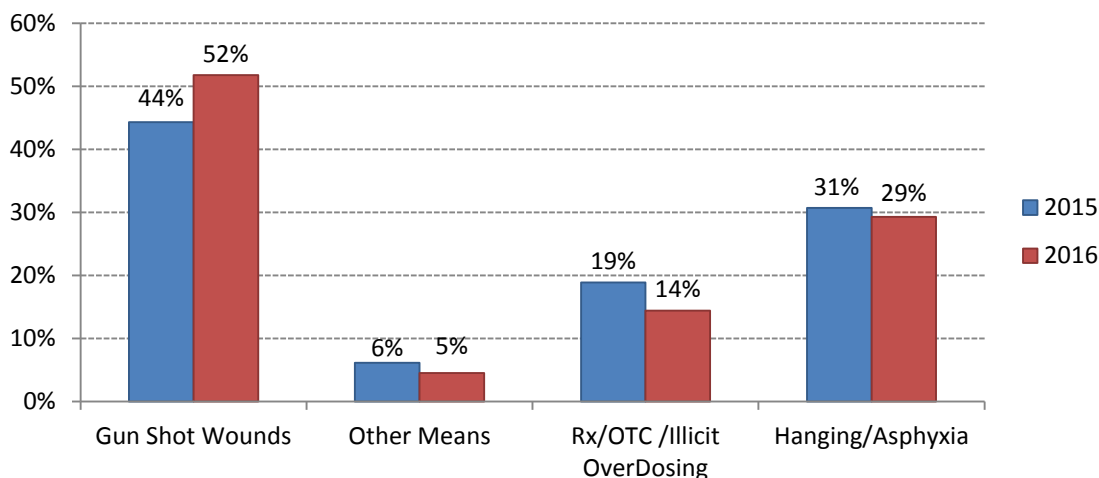
In New Hampshire, there are two stark methods for suicides. The most common mechanism of injury used by suicide victims in the years 2015 and 2016 were by firearms and by hanging and asphyxia. Overdosing deaths resulting from prescription drugs, over the counter medications and illicit drugs are the third most lethal method for suicides in New Hampshire. Using firearms in suicides is still the most lethal mean as it is evident there is an uptick in the percentage of victims of suicide who used firearms. On the other end, it should be noticed that there was a decline in the percentage of victims who overdosed on prescription/ over the counter medications or illicit drugs in 2016 (see **Figure 32 & Table 13**). We should also state that most of the time suicide victims who overdosed on substances also overused alcohol as well in their suicide attempts, as it is evident from surveillance data¹⁵.

¹⁴ These rates should not be taken to occur simultaneously. A suicide victim may have financial difficulties but had not experienced either prior suicide attempt (s) or alcohol abuse. However, there are other victims who experienced the effects from more than one or all these stressors.

¹⁵ We are advocating for a process of standardizing surveillance data collection.

Figure 32

Most Lethal Methods of Suicides in NH 2015 - 2016



In close examination of the mannerism of the suicides by the types of inflicted wounds or injuries, the majority of victims inflicted injuries to their heads or hanged themselves. Handguns, revolver or pistol are the most utilized firearms in suicides.

Table 16

Most prevalent injuries from suicide by firearms

| NH Suicides by Firearms 2015 -2016 | |
|--|-----|
| Total Suicide Victims 2015-2016 | 450 |
| Total Suicides by firearms 2015-2016 | 232 |
| Percent of Suicide by Rifle/Shotgun | 21% |
| Percent of Suicide by Revolver/Pistol/Handgun | 75% |
| Percent of Suicide by Unknown Type of Firearms | 4% |
| Percent of Suicide Victims who used their own firearms | 91% |

Suicide victims who used their own firearms fatally accounted for 91%. The longevity of ownership of the firearm varied among the victims. There are victims who bought the firearm less than couple hours before they committed suicide; whereas there are victims who had owned their firearm for a long time. There is one rather distinctive point to add, that victims who bought a firearm and used it shortly thereafter mostly seemed to be selecting common handguns.

In the period of 2015 -2016, 77% of the firearm suicide victims used their own handgun and 22% of the suicide victims used someone else's handgun (Family member, friend or stolen), or there was no information for firearm used ownership.

Emergency Services For Suicide Victims:

Emergency Services provide medical assistance to victims of suicides when they respond. There is no available data corresponding to response time. In 2015, the Emergency Services intervened in about 50% of suicides when a 911 call was triggered and local law enforcement requested assistance; while in 2016, Emergency Services assisted suicide victims about 41% of the time.

Emergency Services intervention varies with respect of the manner of suicide and the degree of lethality. Emergency Services, most of the time, provide only minimal assistance, if any. However, there are times where Emergency Services engaged in extensive lifesaving maneuvers and transported suicide victims to Emergency Departments at regional hospitals.

Suicide Victims Access to Mental Health and Medical Services:

Currently, surveillance data regarding how suicide victims access mental health and medical services is rather sparse. Such data is not easily collected given the nature of the investigation and the conditions at the suicide death scene. Often relatives, friends and next of kin do not have the details regarding the mental issues suicide victims had. Similarly, when it comes to regiments or treatment suicide victims have had, most of the time their next of kin do not have much information such as: did the victim have a primary care physician or mental health counselor, or if, and when, they were hospitalized for mental health issues. For 2015, among suicide victims only 44% have had some access to mental or medical service; while in 2016 there were only 45% of suicide victims who had accessed mental or medical services.

Summary

The Office of NVDRS and Opioid Surveillance Reporting and Analysis will collaborate with state organizations regarding violent and undetermined deaths studies and analysis as well as CDC prevention programs. The Office of Violent Death Reporting System, CDC, is working diligently in addressing issues that are related to suicides.

There are numerous studies published by CDC in the period 2015-2017. Recently, CDC had convened a panel of experts from various fields to address issues related to manner of death classification¹⁶, and published the results in the American Journal of Health. Some of these studies are beyond the scope of this analysis and focus on issues such as: life expectancy declining among certain age groups or specific to a gender sub-group in the US; or issues that go beyond explanation from death data, as noted in the study by Sir Angus Deaton¹⁷ of Princeton University. Professor Deaton had testified in front of congress on what he called “deaths of despair”. According to Deaton’s results, our findings line up closely with the studies already cited here.

Lastly, we urge stakeholders, organizations and scholars involved in the issues of suicides and violent deaths to engage with the Office of NVDRS and Opioid Surveillance Reporting and

¹⁶ Am J Public Health. 2017; 107:1233 – 1239;
<http://ajph.aphapublications.org/doi/10.2105/AJPH.2017.303863>;

¹⁷ Case A, Deaton A. Rising morbidity and mortality in midlife among White non-Hispanic Americans in the 21st century. Proc Natl Acad Sci U S A. 2015;112(49):15078–15083

Analysis at the Medical Examiner's Office. We also suggest participation in addressing prominent topics like why suicide victims were often not engaged in mental health services; and often times their deaths were related to problems with an intimate partner, unemployment and recent crises.

NH Behavioral Risk Factor Surveillance System (BRFSS)

The Behavioral Risk Factor Surveillance System (BRFSS), a survey conducted with a representative sample of state residents, includes a core question on the number of days that poor physical or mental health kept individuals from doing their day-to-day activities. Although this is not a perfect proxy measure for depression, it gives one a general sense of the percentage of NH residents that may be experiencing depression. The results from this item are included in **Figure 33** (pg. 56).

Positive Outcomes and Testimonials

Safe Messaging and Media Guidelines:

Work has been done continuously across the state to educate the public and media about safe messaging, a national best practice standard (www.sprc.org/library/SafeMessagingfinal.pdf). Safe messaging has become part of the standard for statewide and regional meetings, part of suicide prevention trainings, a guide for health promotion materials and essentially part of the culture in NH. Media Guidelines have been disseminated to media outlets across the state, and journalism students in several universities in NH have received training in the Media Guidelines and how to safely write about suicide. The Communications/Media Sub-Committee of the SPC provides feedback to media outlets and suicide prevention experts in the state to guide public information that is produced through consultation, media contributions and feedback. The results of these efforts became evident after the tragic death of Robin Williams. (Instead of) Rather than sensationalizing this highly publicized tragedy, many media outlets across NH interviewed local representatives in the mental health and suicide prevention field. "Not only did the media in our state reach out to partner with key stakeholders to create responsible follow up articles, but all of the people interviewed provided the same consistent messages of hope and help for those struggling with mental illness and resources for those in crisis. It was clear that everyone, independent of each other, was reading off of the same page."

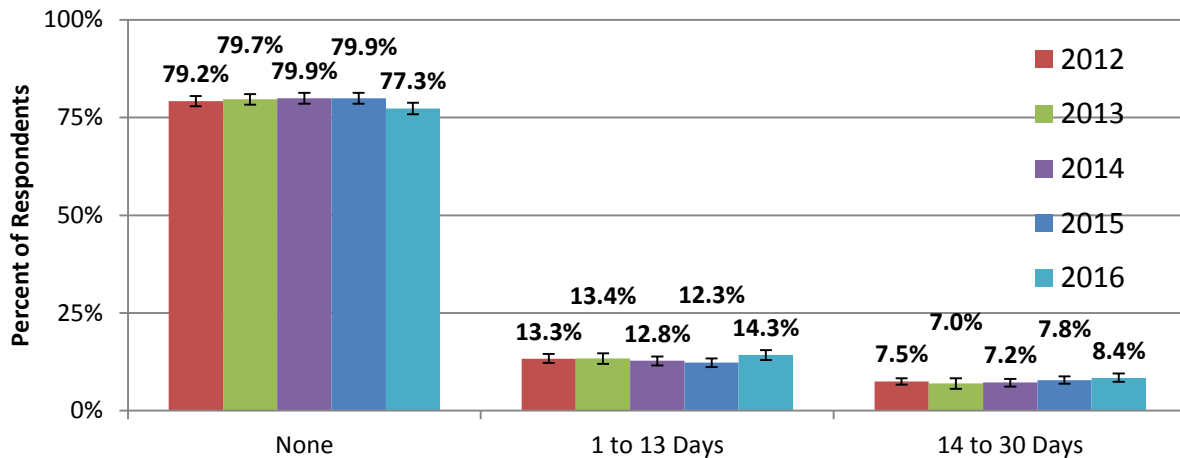
Elaine de Mello
Supervisor of Training and Prevention Services
NAMI New Hampshire

Figure 33
NH BRFSS – Number of Days Physical or Mental Health Impacted Daily
Activities of NH Residents Age 18 and Over.

NH BRFSS - 2012-2016

How many days did poor physical or mental health keep you from doing
your usual activities, such as self-care, work or recreation

Data Source: NH DHHS BPHSI



Data from the NH National Guard

From 2012 through 2016 the NH National Guard recorded a total of 85 suicide related incidents of varying levels of severity (ideation, plan in place, attempt, or death), with the majority being ideation or having a plan in place. Of these incidents, 25% were from individuals under the age of 22 and 39% were age 22-26, 11% were age 27-31, 7% were age 32-36, and 8% were age 37-41. The remaining 11% were age 42 and above. Fifty-two percent of the incidents were by non-deployed personnel, veterans, or dependents of National Guard personnel. Of the incidents recorded, 88% were by males and 12% were by females (males may be disproportionately represented among NH National Guard compared with the general population).

Positive Outcomes and Testimonials

The NH Army National Guard Substance Abuse Program (NH ARNG SAP) has a mission to deliver prevention training, promote family and peer support through education, and provide treatment resources in an effort to increase military discipline, individual performance, and combat readiness and resilience. This work is done in collaboration with the work of the NH Army National Guard Suicide Prevention Program. The NH Army National Guard Suicide Prevention Program (NH ARNG SPP) has a mission to implement proactive and caring strategies to serve Soldiers, Family members, and Army civilians. The NH ARNG SPP works with a variety of civilian and NH ARNG supports who recognize imminent danger and take immediate action to save a life.

In Training Year 2013 the ARNG was able to hire Department of Defense Contractors to supplement the NH ARNG SAP and NH ARNG SPP positions in each state and territory to assist the ARNG's continued efforts of prevention and resilience training to reduce high risk behaviors for its Soldiers, Families and Army civilians.

Data on NH Veterans from the Veterans Administration (VA)

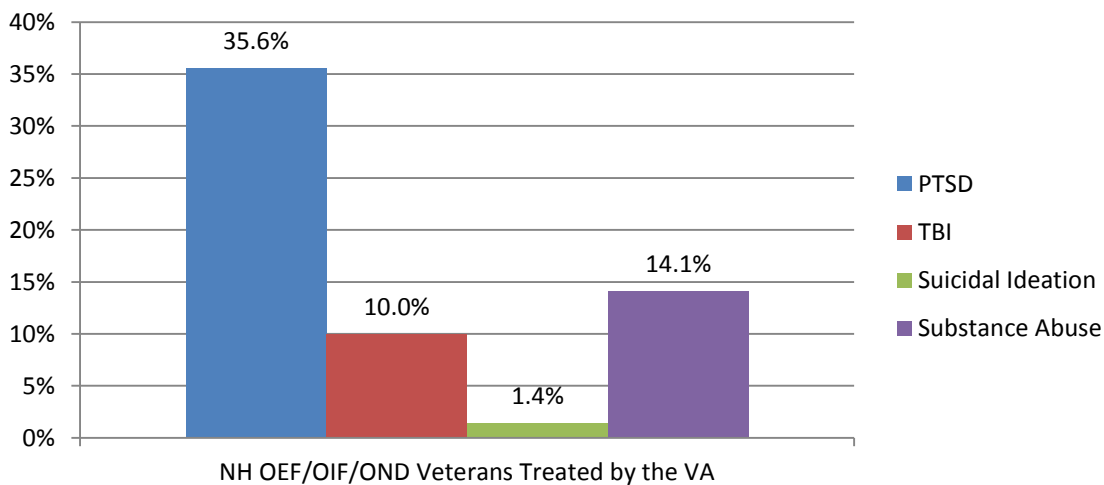
The VA provides care to many of the Veterans in the State of NH including those recently returned from Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND). Of the NH Veterans who served in OEF/OIF/OND, approximately 3,200 are treated at the VA each year. The percentage of these individuals treated for post-traumatic stress disorder (PTSD), traumatic brain injuries (TBI), suicidal ideation, and substance abuse are presented in **Figure 34** below.

Figure 34

More than one in four NH OEF/OIF/OND Veterans treated at the VA have a primary or secondary diagnosis of PTSD.

Percentage of NH OEF/OIF/OND Veterans treated at the VA with PTSD, TBI, suicidal ideation, or substance abuse as their primary or secondary diagnosis Federal Fiscal Years 2013 - 2015

Data Source: Veterans Administration



Data from the NH Department of Corrections

From January 1, 2016 to November 15, 2016¹⁸ the NH Department of Corrections screened 910 males and 184 females for suicidality and history of trauma upon their entry into the prison facilities. (**Note:** this does not reflect the populations in county or local facilities.) After an immediate screening by a correctional officer, mental health staff met with the individuals within 14 days of entry into the system to complete an individual in-depth mental health assessment. Data available from 2016 shows that approximately 18% of males and 26% of females indicated a past suicide attempt¹⁹. Although past suicidal ideation and attempts were relatively high for this group, roughly 1% of the individuals screened at intake answered yes to the question, “Are you

¹⁸ NH Department of Corrections switched EMR on November 16, 2016.

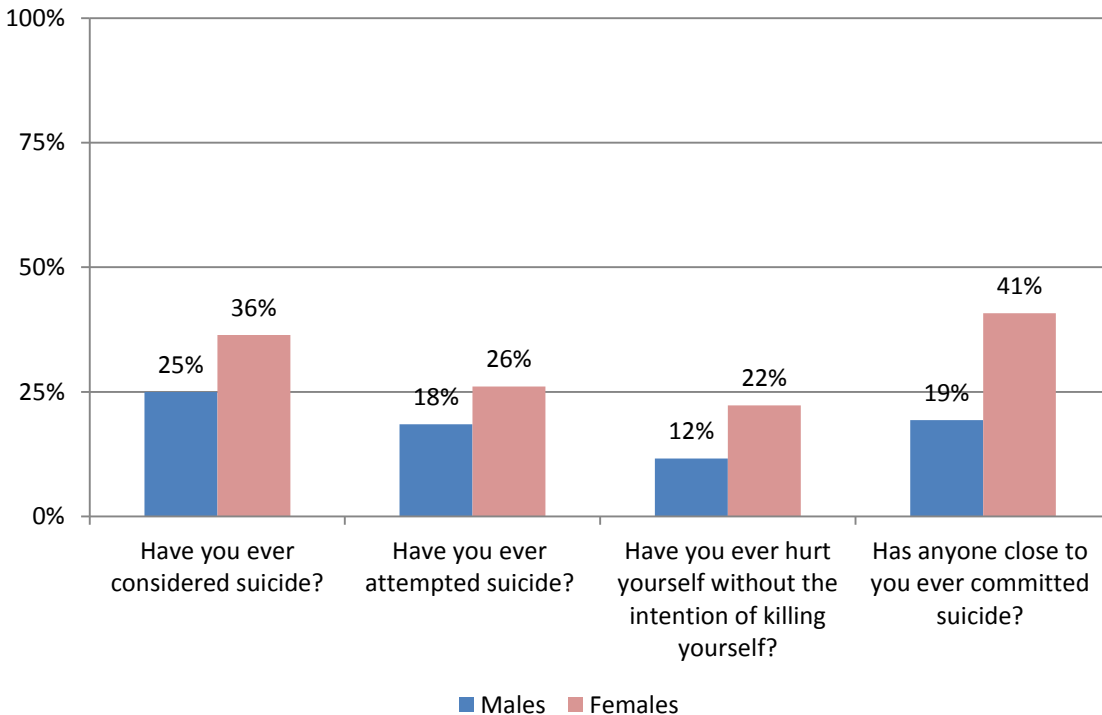
¹⁹ This information should be interpreted cautiously as it is self-reported at a single point in time.

currently thinking about killing yourself?” **Figure 35** (below) displays the percentage of intakes indicating suicidal ideation and/or attempts by gender. In 2016, there were zero deaths due to suicide in the NH Prison System (facilities operated by the NH Department of Corrections).

Figure 35

Percentage of individuals entering NH prisons 2016 indicating past suicidal ideation, attempts, and/or history of trauma by gender.

Data Source: NH Department of Corrections



Suicide Rates in NH

Until 2010 data had indicated that rates of youth and young adult suicide and suicidality overall in NH were flat or on a downward trend. It is nearly impossible to firmly establish causality for such trends. Statewide collaborative prevention efforts, including the work of YSPA, the SPC, implementation of NH’s Suicide Prevention Plan, the *Connect* Program, GLS funding through the SAMHSA, CALM and the work of many community partners likely played a role in that downward trend. Even though rates have recently increased, the value of prevention efforts should not be discounted. Without the continued work of these individuals and organizations, a greater increase in NH suicide rates may have occurred.

Figure 36 (below) presents NH suicide death rates for youth and young adults aged 10-24 in rolling three-year intervals from 2005 to 2014. **Figure 36** shows a small dip for the 2005-2007 and 2006-2008 intervals. However, this decrease and the subsequent increase are not statistically significant from interval to interval. The rolling three-year intervals for NH residents of all ages combined does show a significant difference between the first two intervals (2005-2007 and 2006-2008) final three intervals (2010-2012, 2011-2013, and 2012-2014), with the first two intervals being significantly lower. Additionally, the 2007-2009 interval was significantly lower than the 2012-2014 interval (**Figure 37** – pg. 60).

Figure 36

Suicide rates among 10-24 year old NH residents have increased from 2006-2015.

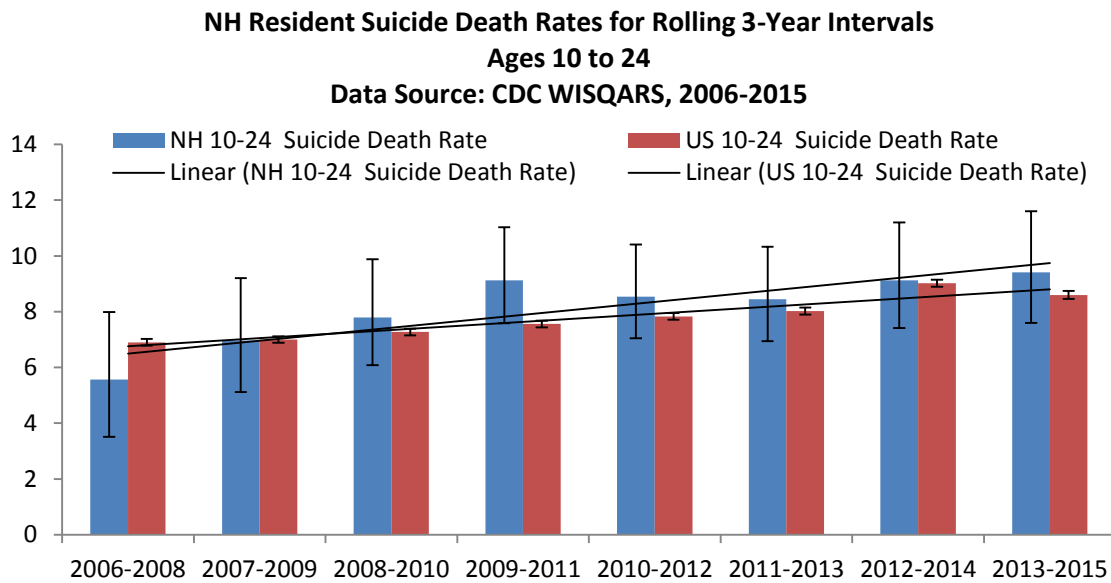


Figure 37

Figure 37 shows that the suicide death rate for people of all ages in NH has increased over the last 10 years.

**NH Resident Suicide Death Rates for Rolling 3-Year Intervals
All Ages**

Data Source: CDC WISQARS, 2006-2015

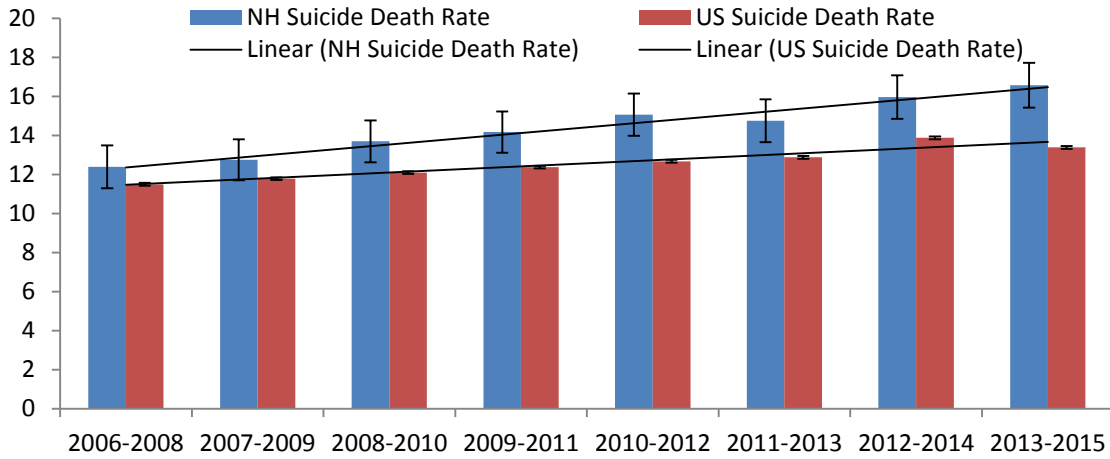
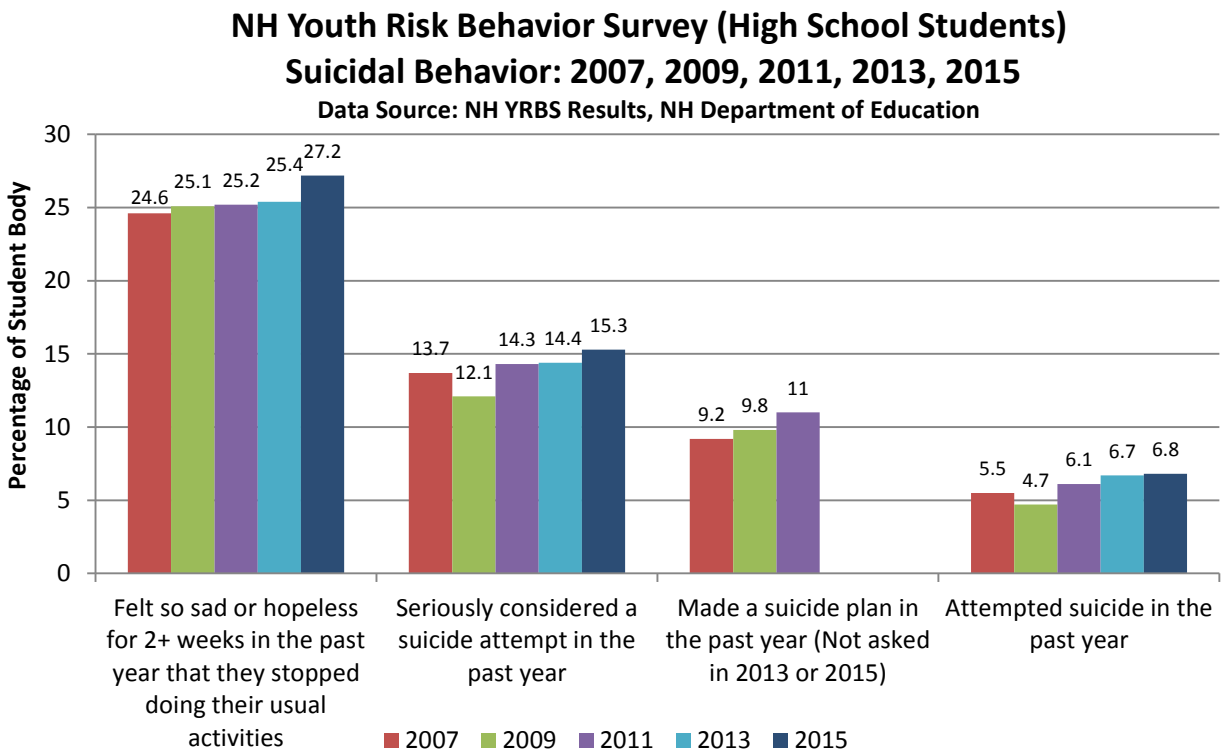


Figure 38 (below) indicates results of the NH YRBS from 2007, 2009, 2011, 2013, and 2015. The percentage of high school youth in NH who seriously considered a suicide attempt in the past year and the percentage of those who made a suicide plan in the past year have both increased slightly between 2007 and 2015. In 2015, 1 in 7 youth surveyed reported having seriously considered attempting suicide in the past year, while 1 in 15 reported actually having made an attempt.

Figure 38

Depression among high school youth remains at about one fourth of the population despite decreases in suicide attempts and suicidal ideation from 2007 to 2015.



The NH YRBS item addressing whether students have made a suicide plan in the past year was not asked in 2013 or 2015. This was done due to the similarity to the question asking whether youth had seriously considered a suicide attempt during the past year. The removal of this question allowed for the addition of a question addressing non-suicidal self-inflicted injuries (e.g., cutting or burning oneself without the intent of dying). The results of that new question indicate that 18.5% of NH high school age youth (10.2% of males and 27% of females) report intentionally hurting themselves without the intent to die during the past year (NH YRBS, 2015).

Reading Tables and Figures

This section is intended to assist the reader in interpreting the various charts included in the report. The four topics covered in this section include types of charts; common parts of a chart; frequently used scales in charts; and interpreting the information presented in a chart. These topics contain information that applies primarily to the charts included in this report, but much of the information can also be applied elsewhere.

Types of Charts

- **Line Chart:** A line chart presents a series of connected observations in order. For example, the line chart in **Figure 3** of this report shows the number of youth and young adult suicides over a 10-year span in NH.
- **Pie Chart:** A pie chart gives the percent values for the individual parts of a whole using a circle that is divided into wedges. For example, a pie chart (**Figure 14**) of this report shows the percent of male and female youths and young adults in NH that died by suicide from 2010 to 2014.
- **Bar Chart:** A bar chart shows the values for one or more categories using rectangular boxes with height representing the value (greater height being a larger value and lesser height being a smaller value). For example, two bar charts (**Figures 9 and 10**) in this report show the number of suicide deaths by age group in NH from 2010 to 2014 and the rate of suicide deaths by age group in NH from 2010 to 2014.

Common Parts of a Chart

- **Title:** The title will generally be found at the top of the chart and should describe the data that are being presented. Depending on the chart this may list the variables and/or the time period. Also, all charts in this report list the data source used.
- **Scales/Labels:** The scales/labels are generally found on the bottom and left side of the chart. The scale/label on the bottom shows what is being measured on the x-axis (horizontal axis) and the scale/label on the left side shows what is being measured on the y-axis (vertical axis). For example, in **Figure 3**, the line chart of youth suicides in NH over the past ten years has a different scale on each axis. On the x-axis (the bottom) are years which range from 2006 to 2015. On the y-axis (the side) the scale is the number of youth suicides, which ranges from 0 to 35.
- **Legend/Key:** Some charts include a legend/key to explain what different colors, shapes, dotted/solid lines mean. The location of this may vary depending on the type of chart and where space is available on the page.
- **Error Bars/Confidence Intervals:** Error bars/confidence intervals represent the range that the actual value may fall within. There is some degree of uncertainty when calculating values such as rates due to statistical error (captured by the confidence intervals) and data quality issues (which there is no real way to estimate). The width of the error bar/confidence interval indicates the level of uncertainty. A wider bar denotes more uncertainty and may indicate more data is needed. A smaller bar indicates a greater level of confidence in the results. When error bars/confidence intervals overlap in a chart, one cannot state with certainty whether there is a significant difference between the

values. Error bars can be seen on several of the charts in this document, including the NH crude death rate chart (**Figure 12**). In that chart you can see that the error bars for Carroll County and Coos County do not overlap the bar for Rockingham County. From this we are able to determine that the rates of suicide in Carroll County and Coos County are significantly different from those Rockingham County.

Frequently Used Scales

- **Standard:** What is being referred to here as standard is a numbered scale that gives the actual value of the variable(s) being presented in the chart (i.e., the number of youth and young adult suicides in a given year).
- **Rate:** A scale using a rate is saying how common something is in relation to a standard value. This report uses rates per 100,000. Therefore a youth and young adult suicide rate of 10 would mean that there are likely to be 10 suicides by youth or young adults for every 100,000 youths or young adults in the population. Rates are approximations based on past data and do not guarantee the same trend will or will not continue.
- **Percent:** A scale using percent is expressing a certain proportion of the variable falls into one category (i.e., 25 percent of youth is equivalent to 25 out of 100 youth).

Interpreting Information from Charts

- Can different charts be compared? Yes, but only under certain circumstances. Different charts should only be compared if they were generated using the same dataset and related variables. Depending on the charts there may be other factors that prevent you from directly comparing them. When in doubt, attempt to contact the person who made the chart or someone with access to the data used to generate the chart.
- Data is generated in a variety of ways and therefore it is not always consistent. For example, in NH the OCME is charged with keeping records of all deaths that occur in the state, regardless of where the person lived. Thus, a Vermont resident who dies in a NH hospital would be included in OCME data. On the other hand, the Bureau of Vital Records collects data on the deaths of NH residents regardless of where the death occurs. So, a NH resident who dies in Massachusetts would be included in Vital Records statistics. Therefore, these two data sets will have small differences. Neither is wrong. They simply measure different things.

Glossary of Terms

Acronyms

| | |
|--|---------|
| American Foundation for Suicide Prevention | AFSP |
| Army National Guard | ARNG |
| Assessing and Managing Suicide Risk | AMSR |
| Behavioral Risk Factor Surveillance System | BRFSS |
| Centers for Disease Control and Prevention | CDC |
| Community Mental Health Center | CMHC |
| Counseling on Access to Lethal Means | CALM |
| Department of Health and Human Services | DHHS |
| Electronic Data Warehouse | EDW |
| Emergency Departments | ED |
| Garrett Lee Smith | GLS |
| Health Insurance Portability and Accountability Act | HIPAA |
| Health Statistics and Data Management | HSDM |
| International Classification of Diseases 10 th Revision | ICD-10 |
| National Alliance on Mental Illness New Hampshire | NAMI NH |
| National Suicide Prevention Lifeline | NSPL |
| Northern New England Poison Center | NNEPC |
| Office of Economic Planning | OEP |
| Office of the Chief Medical Examiner | OCME |
| Operation Enduring Freedom | OEF |
| Operation Iraqi Freedom | OIF |
| Operation New Dawn | OND |
| Post-Traumatic Stress Disorder | PTSD |
| Substance Abuse and Mental Health Services Administration | SAMHSA |
| Substance Abuse Program | SAP |
| Suicide Prevention Council | SPC |
| Suicide Prevention Program | SPP |
| Suicide Prevention Resource Center | SPRC |
| Survivor of Suicide Loss | SOSL |
| Traumatic Brain Injury | TBI |
| Veterans Administration | VA |
| Web-based Injury Statistics Query and Reporting System | WISQARS |
| Youth Risk Behavior Survey | YRBS |
| Youth Suicide Prevention Assembly | YSPA |

Age Adjustment and Rates

All rates in this document are age-adjusted to the 2010 US standard population. This allows the comparison of rates among populations having different age distributions by standardizing the age-specific rates in each population to one standard population. Age-adjusted rates refer to the number of events that would be expected per 100,000 persons in a selected population if that

population had the same age distribution as a standard population. Age-adjusted rates were calculated using the direct method as follows:

Where,

m = number of age groups

d_i = number of events in age group i

P_i = population in age group i

S_i = proportion of the standard population in age group i

This is a weighted sum of Poisson random variables, with the weights being (S_i / p_i).

$$\hat{R} = \sum_{i=1}^m s_i (d_i / p_i) = \sum_{i=1}^m w_i d_i$$

Age Specific Rate/Crude Rates

The age-specific rate or crude rate is the number of individuals with the same health issue per year within a specific age group, divided by the estimated number of individuals of that age living in the same geographic area at the midpoint of the year.

Confidence Intervals (Ci)

The standard error can be used to evaluate statistically significant differences between two rates by calculating the confidence interval. If the interval produced for one rate does not overlap the interval for another, the probability that the rates are statistically different is 95% or higher.

The formula used is:

Where,

R = age-adjusted rate of one population

z = 1.96 for 95% confidence limits

SE = standard error as calculated below

$$R \pm z (SE)$$

A confidence interval is a range of values within which the true rate is expected to fall. If the confidence intervals of two groups (such as NH and the US) overlap, then any difference between the two rates is not statistically significant. All rates in this report are calculated at a 95% confidence level.

Data Collection

The BRFSS is a telephone survey conducted annually by the health departments of all 50 states, including NH. The survey is conducted with assistance from the federal CDC. The BRFSS is the largest continuously conducted telephone health survey in the world and is the primary source of information for states and the nation on the health-related behaviors of adults. The BRFSS has been conducted in NH since 1987. HSDM develops the annual questionnaire, plans survey protocol, locates financial support and monitors data collection progress and quality with the assistance of CDC. HSDM employs a contractor for telephone data collection. Survey data are submitted monthly to CDC by the contractor for cleaning and processing and then returned to HSDM for analysis and reporting.

Death Certificate Data is collected by the Department of Vital Records in NH and provided to the HSDM through a Memorandum of Understanding. Death Certificate Data is available to the HSDM through the state Electronic Data Warehouse (EDW), a secure data server.

Hospital Discharge Data for inpatient and emergency department care is compiled, and de-identified at the Maine Health Information Center, delivered to the Office of Medicaid Business and Policy for further cleaning, then available to the HSDM through the state EDW.

State and county population estimates for NH data are provided by HSDM, Bureau of Disease Control and Health Statistics, Division of Public Health Services, and NH DHHS. Population data are based on US Census data apportioned to towns using NH Office of Economic Planning (OEP) estimates and projections, and further apportioned to age groups and gender using Claritas Corporation estimates and projections to the town, age group, and gender levels. Data add up to US Census data at the county level between 1990 and 2005 but do not add to OEP or Claritas data at smaller geographic levels.

Data Confidentiality

The data provided in this report adheres to the NH DHHS “Guidelines for Release of Public Health Data” and the Health Insurance Portability and Accountability Act (HIPAA). Data are aggregated in to groups large enough to prevent constructive identification of individuals who were discharged for hospitals or who are deceased.

Graphs

Graphs have varying scales depending on the range of the data displayed. Therefore, caution should be exercised when comparing such graphs.

Incidence

Incidence refers to the number or rate of new cases in a population. Incidence rate is the probability of developing a particular disease or injury occurring during a given period of time; the numerator is the number of new cases during the specified time period and the denominator is the population at risk during the period. Rates are age-adjusted to 2010 US standard population. Some of the rates also include age-specific rates. Rates based on 10 or fewer cases are not calculated, as they are not reliable.

Death Rate

Death rate is the number of deaths per 100,000 in a certain region in a certain time period and is based on International Classification of Diseases 10th Revision (ICD-10). Cause of death before 1999 was coded according to ICD-9; beginning with deaths in 1999, ICD-10 was used.

Reliability of Rates

Several important notes should be kept in mind when examining rates. Rates based on small numbers of events (e.g. less than 10 events) can show considerable variation. This limits the usefulness of these rates in comparisons and estimations of future occurrences. Unadjusted rates (age-specific or crude rates) are not reliable for drawing definitive conclusions when making comparisons because they do not take factors such as age distribution among populations into account. Age-adjusted rates offer a more refined measurement when comparing events over geographic areas or time periods. When a difference in rates appears to be significant, care should be exercised in attributing the difference to any particular factor or set of factors. Many variables may influence rate differences. Interpretation of a rate difference requires substantial data and exacting analysis.

Small Numbers

With very small counts, it is often difficult to distinguish between random fluctuation and meaningful change. According to the National Center for Health Statistics, considerable caution must be observed in interpreting the data when the number of events is small (perhaps less than 100) and the probability of such an event is small (such as being diagnosed with a rare disease). The limited number of years of data in the registry and the small population of the state require policies and procedures to prevent the unintentional identification of individuals. Data on rare events, and other variables that could potentially identify individuals, are not published.

Standard Errors

The standard errors of the rates were calculated using the following formula:

Where,

w_j = fraction of the standard population in age category

n_j = number of cases in that age category

p = person-years denominator

$$\text{S.E.} = \sqrt{\frac{w_j^2 n_j}{p_j^2}}$$

Frequently Asked Questions about NH Suicide Data

Q: Statistical significance of suicide deaths vs. significance in the community.

A: Statistical significance, which this document focuses on, is used to look at whether the change in the number of suicide deaths from one time period to another has truly increased/decreased, or whether the difference is due to random chance. In general in NH a small number of additional deaths are unlikely to result in a statistically significant change. However, the significance of even a single death in a family or a community is tremendous. When discussing “significance” it is best to be clear about whether the focus is on measurable changes or the practical impact on a family or community.

Q: Have there been more suicide deaths in NH during “X” months of this year compared with previous years?

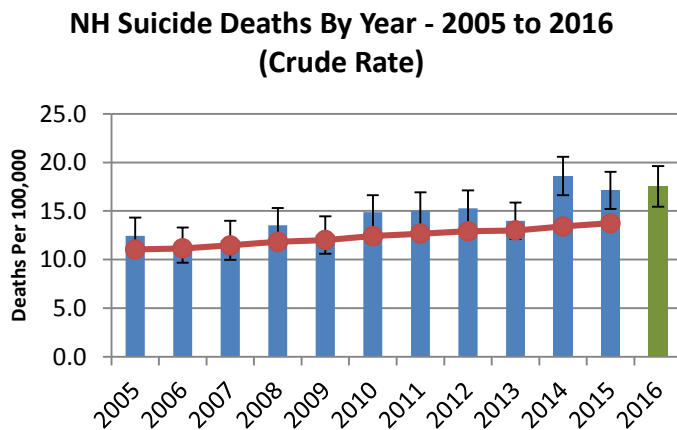
A: It is best to focus on data from a full year or multiple years rather than periods of just a few months. Over brief periods these numbers are too volatile to draw accurate conclusions from them.

Q: If there is an increase during part of a year does this mean that there will be a greater number of suicide deaths during the remainder of the year when compared with previous years?

A: Not necessarily. Even though there may have been a greater number of deaths during part of a given year, this does not indicate that there will be a greater number of deaths for the remainder of the year. **Until the end of the year it is not possible to say whether the overall number of suicide deaths will be higher or lower than previous years.**

Q: Has NH ever had a large change in suicide deaths from one year to the next?

A: As a small state, NH has a substantial degree of variability in the suicide deaths in a given year. It is not at all uncommon for the number (and rate) of suicide deaths in NH to vary by as much as 33% (up or down) from the previous year – see chart and table below. Significant differences are indicated by non-overlapping confidence intervals (the brackets overlaid on the bars in the chart). For example, the confidence intervals for 2006 do not overlap with the 2014 through 2016 confidence intervals, meaning that the rate for 2014 - 2016 was significantly higher than the rate for 2006.



| Change in Rate per 100,000 from Year to Year | |
|--|-----------------------------------|
| 2005-2006 | 12.45 to 11.51 (Down 8%) |
| 2006-2007 | 11.51 to 12.04 (Up 5%) |
| 2007-2008 | 12.04 to 13.60 (Up 13%) |
| 2008-2009 | 13.60 to 12.61 (Down 7%) |
| 2009-2010 | 12.61 to 14.89 (Up 18%) |
| 2010-2011 | 14.89 to 15.02 (Up 1%) |
| 2011-2012 | 15.02 to 15.29 (Up 2%) |
| 2012-2013 | 15.29 to 13.99 (Down 9%) |
| 2013-2014 | 13.99 to 18.60 (Up 33%) |
| 2014-2015 | 18.60 to 17.14 (Down 8%) |
| 2015-2016 | 17.14 to 17.61 (Up 3%) |

2005-2015 = CDC Data, 2016 = NH Data

Q: What are the differences between the Centers for Disease Control (CDC) data and NH data on suicide deaths?

A: The CDC data includes all deaths of NH residents regardless of whether they occurred in the state or elsewhere. The NH data comes directly from the Office of Chief Medical Examiner (OCME) and includes all suicide deaths that have occurred in the state, even if the death was of a non-resident. Also, CDC data are often not released until 12-24 months after the end of a calendar year (e.g., 2007 data were released in mid-2010). The NH data are available within months of a calendar year ending.

Q: What is the difference between a rate and a count?

A: A count simply shows the number of incidents that have taken place during a given period of time (e.g., 100 deaths in a one year period). A rate is a way of showing the prevalence of something among the population. For example, saying that there are 10 deaths resulting from “x” per 100,000 means that in a given population approximately 10 out of every 100,000 individuals have been found to die as a result of “x”.

Q: Has “X” (e.g., the recession) caused the increase/decrease in the number of suicide deaths in a specific year?

A: Suicide is a complex issue, and it is not possible to say that a single factor is the direct cause of these deaths. For instance from 2004 to 2005, the number of deaths were up over 20% followed by an 8% decrease from 2005 to 2006; we are still unable to identify the underlying cause of these fluctuations and whether any of those deaths are attributable to the same cause.

Q: How do the number of suicide deaths compare to other causes of death in the state?

A: 10 Leading Causes of Death, New Hampshire, by Age Group, 2011 – 2015

| | | Age Groups | | | | | | | | | | | |
|------|----------------------------------|------------------------------|-----------------------------|-----------------------------|--|--|---------------------------------------|---------------------------------------|--|--|--|--|--|
| Rank | <1 | 1-4 | 5-9 | 10-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | All Ages | | |
| 1 | Congenital Anomalies 44 | Unintentional Injury 10 | Malignant Neoplasms --- | Malignant Neoplasms 11 | Unintentional Injury 252 | Unintentional Injury 498 | Unintentional Injury 381 | Malignant Neoplasms 993 | Malignant Neoplasms 2,572 | Heart Disease 10,179 | Malignant Neoplasms 13,455 | | |
| 2 | Short Gestation 41 | Congenital Anomalies --- | Unintentional Injury --- | Suicide --- | Suicide 109 | Suicide 149 | Malignant Neoplasms 207 | Heart Disease 570 | Heart Disease 1,195 | Malignant Neoplasms 9,561 | Heart Disease 12,126 | | |
| 3 | Maternal Pregnancy Comp. 29 | Heart Disease --- | Homicide --- | Unintentional Injury --- | Malignant Neoplasms 20 | Malignant Neoplasms 76 | Suicide 166 | Unintentional Injury 453 | Unintentional Injury 355 | Chronic Low Respiratory Disease 2,936 | Chronic Low Respiratory Disease 3,377 | | |
| 4 | Placenta Cord Membranes 17 | Homicide --- | Cerebro-vascular --- | Benign Neoplasms --- | Heart Disease 14 | Heart Disease 38 | Heart Disease 119 | Suicide 281 | Chronic Low Respiratory Disease 329 | Cerebro-vascular 2,082 | Unintentional Injury 3,276 | | |
| 5 | SIDS 11 | Influenza & Pneumonia --- | Congenital Anomalies --- | Congenital Anomalies --- | Homicide 14 | Congenital Anomalies 14 | Liver Disease 37 | Liver Disease 165 | Liver Disease 250 | Alzheimer's Disease 1,924 | Cerebro-vascular 2,319 | | |
| 6 | Circulatory System Disease 10 | Malignant Neoplasms --- | Heart Disease --- | Heart Disease --- | Cerebro-vascular --- | Homicide 12 | Diabetes Mellitus 23 | Diabetes Mellitus 106 | Diabetes Mellitus 248 | Unintentional Injury 1,349 | Alzheimer's Disease 1,966 | | |
| 7 | Respiratory Distress --- | Benign Neoplasms --- | Suicide --- | Homicide --- | Chronic Low Respiratory Disease --- | Diabetes Mellitus --- | Homicide 17 | Chronic Low Respiratory Disease 85 | Suicide 203 | Diabetes Mellitus 1,083 | Diabetes Mellitus 1,473 | | |
| 8 | Necrotizing Enterocolitis --- | --- | --- | --- | Benign Neoplasms --- | Chronic Low Respiratory Disease --- | Cerebro-vascular 13 | Cerebro-vascular 64 | Cerebro-vascular 144 | Influenza & Pneumonia 1,022 | Influenza & Pneumonia 1,119 | | |
| 9 | Neonatal Hemorrhage --- | --- | --- | --- | Congenital Anomalies --- | Liver Disease --- | Chronic Low Respiratory Disease 13 | Viral Hepatitis 27 | Septicemia 73 | Nephritis 782 | Suicide 1,060 | | |
| 10 | Unintentional Injury --- | --- | --- | --- | Diabetes Mellitus --- | Complicated Pregnancy --- | Two Tied --- | Influenza & Pneumonia 24 | Viral Hepatitis 69 | Parkinson's Disease 582 | Nephritis 869 | | |

Source: CDC WISQARS, 2011-2015

---Note: Beginning with 2008 data, the CDC has suppressed state-level counts for categories with fewer than ten deaths

Contacts and Meeting Information

State Suicide Prevention Council

Primary Contact: Dan Potenza – Daniel.Potenza@doc.nh.gov

Meets 2nd Monday – Every **other** month 10:00 am – 12:00 pm
DHHS, 29 Hazen Drive, Concord

Youth Suicide Prevention Assembly

Primary Contact: Elaine de Mello – edemello@naminh.org

Meets 2nd Thursday of the month 10:00 – 12:30 am
Brown Building, DHHS, Concord

Connect Program of NAMI NH

Primary Contact: Elaine de Mello – edemello@naminh.org

NH Suicide Survivor Network

Primary Contact: Deb Baird – dbaird@naminh.org

Suicide Prevention Council Subcommittees

Communications & Public Education

Chair: Rhonda Siegel – rsiegel@dhhs.state.nh.us

Meets 2nd Wednesday of the month 1:00 pm – 3:00 pm
DHHS, 29 Hazen Drive, Concord

Cross Training & Professional Education

Activity currently suspended

Data Collection & Analysis

Chair: Patrick Roberts – proberts@naminh.org

Meets 4th Friday of the Feb., May, Aug., and Oct. 9:30 – 11:30 am
NAMI NH, 85 North State Street, Concord

Law Enforcement

Chair: Trooper Seth Gahr

Meeting schedule to be determined

Military & Veterans

Co-Chairs: Dale Garrow – dale.garrow@accenturefederal.com

Beth Alves - Beth.Alves@va.gov

Meets 1st Wednesday of the Month 2:30 – 4:00 pm
Manchester Vet Center, Hooksett, NH

Public Policy

Chair: James Mackay – james.mackay@mygait.com

Meeting schedule to be determined

State Suicide Prevention Conference Meetings

Primary Contact: Mary Forsythe-Taber– mft@mih4u.org

Contact Mary Forsythe-Taber for current meeting schedule and location

Suicide Fatality Review

Chair: Dr. Paul Brown

Attendance is by invitation only

Survivors of Suicide Loss

Co-Chairs: Susan Morrison – SOSL4NHSPC@gmail.com

Deb Baird – dbaird@naminh.org

Meets 4th Wednesday of the Month 6:00 pm – 7:30 pm

All meetings held via conference call

Recognize the Warning Signs for Suicide to Save Lives!

Sometimes it can be difficult to tell warning signs from “normal” behavior especially in adolescents. Ask yourself, *is the behavior I am seeing very different for this particular person?* Also, recognize that sometimes those who are depressed can appear angry, irritable, and/or hostile in addition to withdrawn and quiet.

These warning signs can also be applied to adults:

- Talking about or threatening to hurt or kill oneself
- Seeking firearms, drugs, or other lethal means for killing oneself
- Talking or writing about death, dying, or suicide
- Direct Statements or Less Direct Statements of Suicidal Intent: (Examples: “I’m just going to end it all” or “Everything would be easier if I wasn’t around.”)
- Feeling hopeless
- Feeling rage or uncontrollable anger or seeking revenge
- Feeling trapped - like there's no way out
- Dramatic mood changes
- Seeing no reason for living or having no sense of purpose in life
- Acting reckless or engaging in risky activities
- Increasing alcohol or drug use
- Withdrawing from friends, family, and society
- Feeling anxious or agitated
- Being unable to sleep, or sleeping all the time

For a more complete list of warning signs and more information on suicide prevention, please consult the *Connect* website at <http://www.theconnectprogram.org> and click on Understanding Suicide.

If you see warning signs and/or are otherwise worried that this person:

Connect with Your Loved One, Connect Them to Help

- 1) Ask directly about their suicidal feelings. Talking about suicide is the first step to preventing suicide!
- 2) Let them know you care.
- 3) Keep them away from anything that may cause harm such as guns, pills, ropes, knives, vehicles.
- 4) Stay with them until a parent or professional is involved.
- 5) Offer a message of hope - Let them know you will assist them in getting help.
- 6) Connect them with help:
 - * National Suicide Prevention Lifeline (24/7) **1-800-273-TALK (8255)** (press “1” for veterans)
 - * The Lifeline also offers text based chat through their website: <http://www.suicidepreventionlifeline.org/>
 - * Head rest – For teens and adults (24/7) **1-800-639-6095** or your local mental health center
 - * For an emergency, **dial 911.**



Mental Health and Suicide Prevention Resources

General Resources:

Local Resources

Community Mental Health Centers: <http://www.dhhs.state.nh.us/dcbcs/bbh/centers.htm>

Disaster Behavioral Health Response Teams: <http://www.dhhs.nh.gov/esu/dbhrtnh.htm>

NAMI New Hampshire: www.naminh.org, 603-225-5359

Gay, Lesbian Bisexual, and Transgender (GLBT) Resources

Family Acceptance Project www.familyproject.sfsu.edu/

Fenway Peer Listening Line: 1-800-399-PEER www.fenwayhealth.org

GLBT National Hotline (M-F 4-12 pm; Sat. 12-5 pm): 1-888-843-4564 www.glnh.org

GLBT National Youth Talkline (M-F 8-12 pm): 1-800-246-PRIDE (7743)

Email: youth@GLBTNationalHelpCenter.org

SPRC Library: www.sprc.org/library_resources/sprc

Trevor Helpline (24/7): 1-866-4u-TREVOR (488-7386) www.thetrevorproject.org

Military Resources

Military One Source: www.militaryonesource.mil

Tragedy Assistance Program for Survivors (TAPS): www.taps.org

US Department of Veterans Affairs: www.va.gov

Veterans Crisis Line: 1-800-273-8255 (press 1 after connecting)

National Organizations

American Association of Suicidology: www.suicidology.org

American Foundation for Suicide Prevention: www.afsp.org

National Action Alliance for Suicide Prevention: actionallianceforsuicideprevention.org

National Alliance on Mental Illness: www.nami.org

Suicide Prevention Resource Center: www.sprc.org

Older Adults

NH Fact Sheet on Suicide and Aging: bit.ly/1KqsBH3

SPRC Older Adult Suicide Prevention Resources: bit.ly/1Jod4n3

Substance Abuse and Mental Health Services Administration (SAMHSA)

Obtaining Prevention Materials:

Visit their website: store.samhsa.gov/home (includes downloadable materials)

Call: 1-877-SAMHSA-7 (1-877-726-4727) or Email: samhsainfo@samhsa.hhs.gov

Treatment Provider Locator:

SAMHSA maintains a searchable list of mental health and substance abuse providers. You can use it to find a local provider by going to www.samhsa.gov/treatment/

Resources for Survivors of Suicide Loss / Individuals Bereaved by Suicide:

National Helplines

Compassionate Friends: 1-877-696-0010

Friends for Survival: 1-800-646-7322

Websites

Alliance of Hope for Suicide Survivors: www.allianceofhope.org

American Foundation for Suicide Prevention: bit.ly/afsp-survivors

Compassionate Friends: www.compassionatefriends.org

The *Connect* Program: <http://www.theconnectprogram.org/survivors>

Friends for Survival: www.friendsforsurvival.org

Grief After Suicide: bit.ly/suicidegriefsupport

Heartbeat: heartbeatsurvivorsaftersuicide.org

Parents, Family and Friends of Suicide Loss: www.pos-ffos.com

SAVE (Suicide Awareness Voices of Education): www.save.org/coping

Survivors of Suicide Loss: www.survivorsofsuicide.com

Suicide: Finding Hope: www.suicidefindinghope.com

Discussion Forums

Parents of Suicides and Friends & Families of Suicides: www.suicidegrief.com

Help for People Left Behind: bit.ly/grieving-suicidesurvivors

Suicide's Survivors: bit.ly/legacy-suicidesurvivors

Booklets

Coping with the Loss of a Friend or Loved One: bit.ly/save-copingwithloss

Financial Guide: www.afsp.org/financialguide

Handbook for Survivors of Suicide: bit.ly/aas-store

Hope and Healing after Suicide: bit.ly/camh-hopehealing

Resource and Healing Guide: bit.ly/afsp-surviving-suicide