
2013 Youth Suicide Report

Data Overview and Recommendations on Youth Suicide in New Jersey

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Executive Summary

Suicide is the 10th leading cause of death in the United States, and the third leading cause of death behind accidents and homicides for youth ages 10-24.¹ Research shows male youth die by suicide four times more frequently than female youth. The three primary suicide methods youth use include firearm (45%), suffocation (40%), and poisoning (8%).² In 2010, 4,867 youth committed suicide in the United States at a rate of 7.6 per 100,000 youth ages 10-23.³

In 2010, 92 New Jersey youth ages 10-23 committed suicide at a rate of 5.3 per 100,000 youth. In comparison, New Jersey has a lower rate of suicide than the national average.⁴ The American Association of Suicidology ranked New Jersey 49 among the 50 states in level of youth suicide.⁵ While this appears to be a low ranking, according to the National Center for Injury Control and Prevention, Centers for Disease Control, suicide is the third leading cause of death for New Jersey youth ages 10-24.⁶ The most recent data for 2010-2012 shows 28% of the 233 youth suicides in New Jersey were committed by youth ages 10-18 and 72% were committed by youth ages 19-24.⁷

As it pertains to suicide attempts, 2,248 youth in New Jersey were hospitalized for attempted suicide and/or self-inflicted injuries between 2010-2012.⁸ The data revealed that females attempt suicide at a rate of 57.0 per 100,000 youth, nearly double that of males who attempt suicide at a rate of 30.6 per 100,000 youth. Female youth attempt suicide at a rate nearly 50% higher (57.0) than male youth (30.6).⁹ However, male youth complete suicide at a higher rate (7.1 per 100,000 youth) than female youth (1.8 per 100,000 youth).¹⁰

New Jersey remains committed to the reduction and ultimate elimination of suicide among its youth. Over the last 30 years, suicide prevention efforts have been enhanced nationwide through public awareness campaigns and advances in mental health treatment. New Jersey is among few states providing ongoing youth suicide prevention and public awareness.

The New Jersey Department of Children and Families (DCF) is committed to using data to inform its efforts and achieve its mission to ensure the safety, well-being and success of New Jersey's children and families. DCF understands that proper data collection is essential to ensuring confidence in the data used to guide its efforts. In addition, DCF recognizes the value of building partnerships within and among State and local systems, with community service providers, the private sector, foundations, universities and the media in combatting youth suicide.

By effectively using data and strengthening and extending partnerships, New Jersey can continue to make strides to increase awareness of the protective and promotive factors to prevent youth suicide. DCF's commitment to partnership and the use of data is evident in two programs made available to the community through the Traumatic Loss Coalitions for Youth Program (TLC) and 2ND Floor Youth Helpline. The Division of Family and Community Partnerships is committed to working with our community partners by increasing training, public awareness, and creating safe messaging guidelines in the field of suicide prevention. The New Jersey Youth Suicide Prevention Advisory Council continues to advise the Department in examining the existing needs and services and making recommendations

pertaining to youth suicide reporting, prevention, and intervention. The Garrett Lee Smith (GLS) Youth Suicide Prevention Grant from the U.S. Department of Health and Human Services' Substance Abuse Mental Health Services Administration (SAMSHA) was awarded to University Behavioral Health Care at Rutgers University - Traumatic Loss Coalition for Youth in 2012. Now in year two of implementation, the New Jersey Youth Suicide Prevention Project continues to focus on youth ages 10-24. As of November 2013, 860 mental health professionals have been trained in various evidenced based and best practice suicide prevention trainings in 4 of the 6 counties identified: Passaic, Camden, Monmouth, and Bergen. The NJYSPP will quickly begin rolling out implementation for the remaining 2 counties in Hudson and Middlesex. This partnership remains committed to preventing youth suicide in our state.

1-4, 6-10 Center for Disease Control and Prevention –WISQARS website (<http://www.cdc.gov/injury/wisqars/index/html>)

5 Prepared by John L. McIntosh, Ph.D. & Christopher W. Drapeau, MA for American Association of Suicidology

Introduction

DCF's Family and Community Partnerships (FCP) compiled the data in this report, which includes aggregate demographic information about youth (ages 10-24) who have attempted or completed suicide. The annual Adolescent Suicide Report is presented to Governor Chris Christie, the New Jersey Legislature, and the New Jersey Youth Suicide Prevention Advisory Council (NJYSPAC) by DCF, pursuant to N.J.S.A. 30:9A-27.

Data Overview

In compiling the data necessary to produce this report, a number of data challenges were apparent.

Real time Accurate Mortality Data Collection

The need to obtain "real time" accurate mortality data continues to be a challenge in New Jersey and nationally for several reasons:

1. "geographical differences in the definition of suicide and how cases are classified;
2. jurisdictional differences in the requirements for the office of coroner or medical examiner affecting the standard of proof required to classify a death as a suicide; and
3. differences in terms of the extent to which potential suicides are investigated to accurately determine cause of death."¹¹

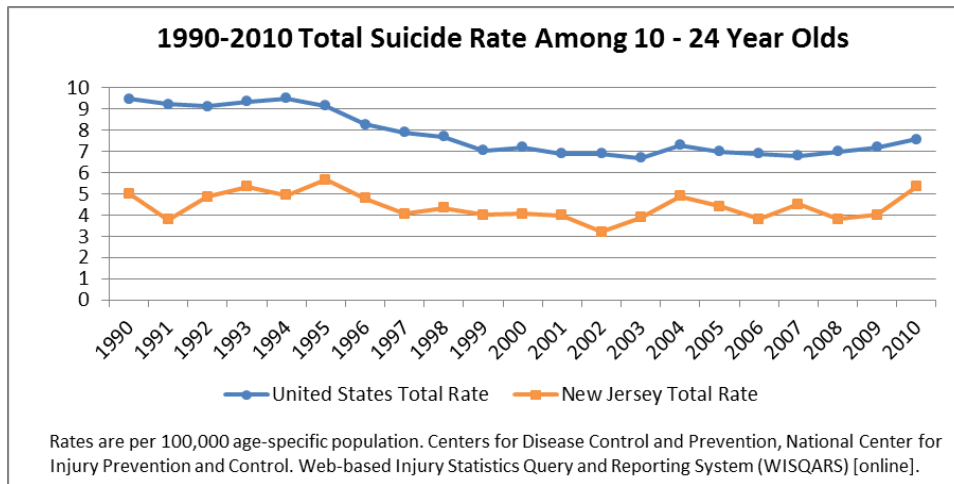
Nonfatal Suicidal Behavior Data Quality

There is neither a systematic nor mandatory reporting requirement for nonfatal suicidal behavior in the United States. The concerns for discrepancies in nomenclature and accurate reporting apply even more to nonfatal suicidal behavior than completed suicides.¹² At this time, the main source of national unintentional and violence-related injury data in the United States is the Centers for Disease Control and Prevention's (CDC) WISQARS (Web-based Injury Statistics Query and Reporting System). This interactive on-line database provides fatal and nonfatal injury, violent death and cause of injury data from a variety of trusted sources. The WISQARS fatal injury and leading cause of death data used in this report comes from the National Vital Statistics System (NVSS) and the CDC's National Center for Health Statistics. The NVSS tracks causes of death from U.S. Standard Certificate of Death data submitted by each state.

¹¹ Center for Disease Control & Prevention, Self-Directed Violence Surveillance-Uniform Definitions and Recommended Data Elements, February 2011

¹² O'Carroll P. A Consideration of the Validity and Reliability of Suicide Mortality Data. *Suicide and Life Threatening Behavior*. 1989;19:1-16

Chart 1, 1990-2010 Total Suicide Rate Among 10-24 Year Olds



New Jersey’s rate of youth suicide has consistently remained lower than the national average for the past 20 years, as indicated above. In fact, beginning in 1996 through 2003, the rate of youth suicide in New Jersey and nationally declined. Unfortunately, after 2003 that average rate rose again and has consistently fluctuated since then. Current suicide prevention efforts may gain insight by reviewing strategies implemented during 1996-2003.

The New Jersey Violent Death Reporting System (NJVDRS) v.07/31/2013 Data

New Jersey is one of 18 states participating in the National Violent Death Reporting System (NVDRS), a central data registry for data related to violent deaths, including suicides. NVDRS allows participating states to review its violent death occurrences and, as needed, compare this data with participating states. New Jersey established and maintains New Jersey Violent Death Report System (NJVDRS) participation through a cooperative agreement with the CDC. NVDRS descriptive data can be accessed from WISQARS.

	New Jersey (WISQARS)						New Jersey (NJVDRS)					
	10-18		19-24		Total		10-18		19-24		Total	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
2003	17	**	48	8.0	65	3.9	18	1.7	47	7.8	65	3.9
2004	32	2.9	52	8.6	84	4.9	31	2.8	51	8.4	82	4.8
2005	20	1.8	55	9.0	75	4.4	17	1.5	61	10.0	78	4.6
2006	18	**	47	7.6	65	3.8	19	1.7	49	8.0	68	4.0
2007	20	1.8	57	9.2	77	4.5	22	2.0	51	8.2	73	4.2
2008	20	1.8	46	7.3	66	3.8	23	2.1	41	6.5	64	3.7
2009	22	2.0	46	7.2	68	4.0	22	2.0	59	9.2	81	4.7
2010	27	2.5	65	10.0	92	5.3	24	2.2	57	8.7	81	4.7
2011	Data not available yet.						25	2.3	48	7.3	73	4.2
2012*	Data not available yet.						16	1.5	63	9.4	79	4.6
Total	176		416		592		176		416		592	

*2012 NJVDRS

The NJVDRS is housed in the New Jersey Department of Health's Center for Health Statistics (CHS)¹³. The system includes the following as violent deaths:

- Homicides (including child maltreatment/abuse and intimate partner homicides)
- Suicides
- Death by legal intervention (when individuals are killed by law enforcement in the line of duty)
- Unintentional firearm injury deaths
- Injury deaths of undetermined intent

NJVDRS data is collected from a variety of sources including:

- Death certificates
- Medical examiner reports
- Law enforcement reports
- Ballistics and crime lab reports
- New Jersey Discharge Data Collection System, Emergency Department & Inpatient Data

It is important to note that in the collection of data, NJVDRS is able to triangulate and compare data from a number of sources, which allows New Jersey to benefit from more current data compared to WISQARS data. While NJVDRS may be viewed as advanced, there is room for improvement. New Jersey does not have a standard reporting protocol for suicides, suicide attempts and suicidal behavior. The development and implementation of a standard reporting protocol will close reporting gaps, improve confidence in collected data, and enhance the development of effective youth suicide prevention strategies.

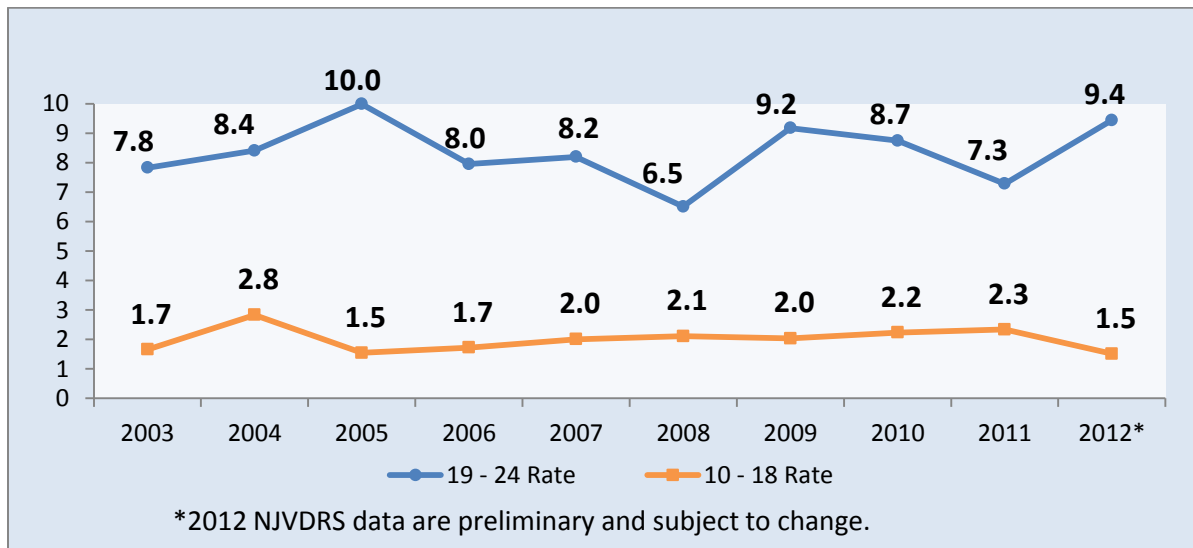
The New Jersey WISQARS data (see chart above) show a notable increase in youth suicide in 2010, the highest rate since 2003. At the same time, NJVDRS data indicates the 2010 rate of youth suicide remained consistent with the previous year. In addition, NJVDRS has data available for 2011 and 2012, whereas WISQARS data was not available at the time of this reporting.

¹³NJ Department of Health –Center for Health Statistics(www.state.nj.us/health/chs/oisp/njvdrs.html).

Confirmed Suicides

The CDC defines suicide as death caused by self-directed injurious behavior with any intent to die as a result of the behavior. The chart below indicates the rate of suicide for youth ages 10-18 is substantially lower than that of youth ages 19-24. New Jersey's rate of youth suicide from 2012 indicates that youth ages 10-18 commit suicide at an annual rate¹⁴ of 1.5 per 100,000 youth. During this same timeframe, the annual rate of suicide for youth ages 19-24 is 9.4 per 100,000 youth. As such, the data reveals that youth no longer in grade school commit suicide at a rate almost nine times higher than school-age youth.

Chart 2, NJVDRS New Jersey Suicide Rates 2003-2012, 19-24 vs. 10-18



Age and Gender

Table 2 below captures the age and gender of the 233 youth suicides that occurred in New Jersey over the last three years. The data reveals that 72% (168) of these suicides were completed by youth ages 19-24. In this same age category, young men complete suicide at a rate four times higher (13.4) than young women (3.3). In addition, male youth ages 10-18 committed suicide at a rate of 3.2, which is also higher than female youth in this same age category. The actual rate of female youth suicide ages 10-18 is not calculated because it was less than 20.

¹⁴ Rate refers to the number of cases occurring during a given time period divided by the population at risk during that same period, multiplied by a unit chosen for standardization (typically 100,000 for deaths, or 1,000 for births). This is a standard way of calculating statistics in public health that takes into account the size of the population so that comparisons can be made across different populations. By using rates instead of raw numbers, the occurrence of disease (or, in this case, suicide) in one group can be fairly compared with another.

Table 2. Suicides by age group and gender, New Jersey, 2010-2012

	Age Group					
	10-18		19-24		Total (10 – 24)	
Gender	N	Rate	N	Rate	N	Rate
Male	52	3.2	137	13.4	189	7.1
Female	13	**	31	3.3	44	1.8
Total	65	2.0	168	8.5	233	4.5

**Rates are not calculated for fewer than 20 observations. Rates are per 100,000 age-specific population.

Race and Ethnicity

Table 3 below captures the race and ethnicity of the 233 youth suicides that took place in New Jersey over the last three years. The interpretation of race and ethnic data as it pertains to Hispanic youth is cautioned because there is a high margin of human error in the capture of this data. Hispanic youth are often undercounted because they are reported as “other” or “white.” Regardless, based on the data we currently have across both age categories below, non-Hispanic white & black youth commit suicide at approximately the same rate. In comparison, across all age categories, Hispanic youth commit suicide at almost a 50% lower rate (2.5).

Table 3. Suicides by age group and race/ethnicity, New Jersey, 2010-2012

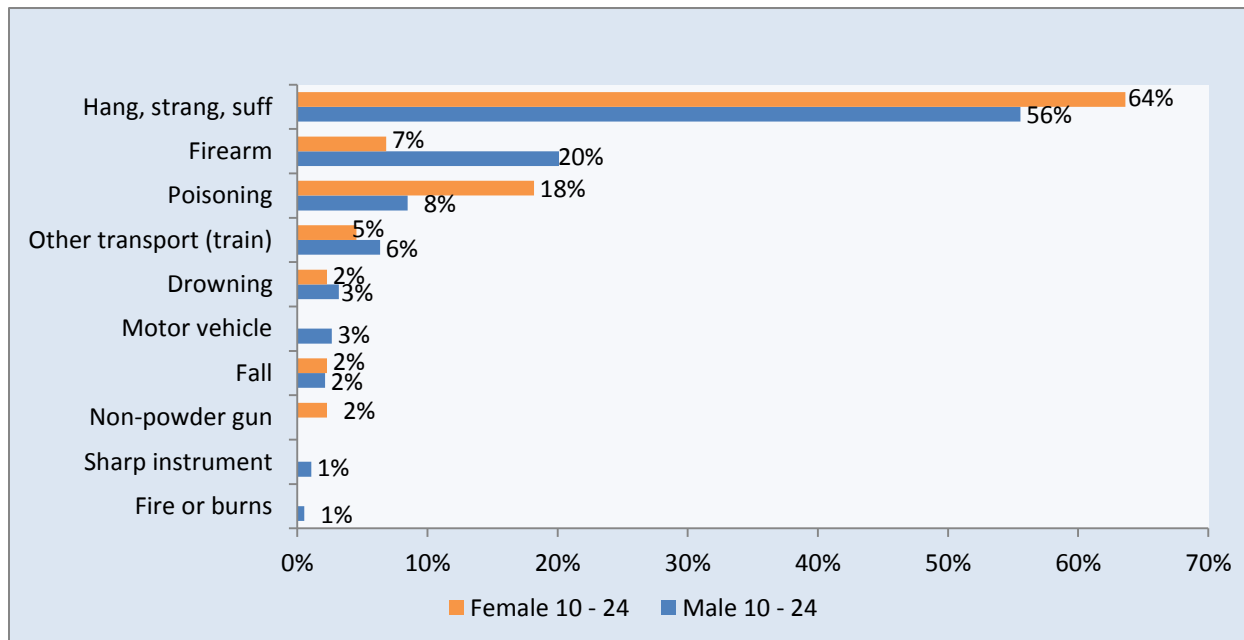
Race/ethnicity	Age Group					
	10-18		19-24		Total 10-24	
	N	Rate	N	Rate	N	Rate
White Non-Hispanic	47	2.7	105	10.4	152	5.5
Black Non-Hispanic	9	**	33	10.0	42	5.1
Hispanic	7	**	22	4.6	29	2.5
Asian/Pacific Islander	1	**	6	**	7	**
Other Race	1	**	2	**	3	**
Total	65	2.0	168	8.5	233	4.5

Rates are per 100,000 age-specific population.

Primary Method

Over the past three years, the primary method to commit suicide by New Jersey youth ages 10-24 was categorized as hanging, strangulation or suffocation (64% of female youth and 56% of male). The second primary method to commit suicide was by firearms. Use of firearms (7%) to commit suicide in New Jersey is substantially less than the national data, which indicates firearms as the primary method (20%). Research shows that males use firearms more often than females, and poisoning is the most common method for females.

Chart 3, Suicide Method/Weapon Used by Gender for Youth Ages 10-24, NJ 2010-2012

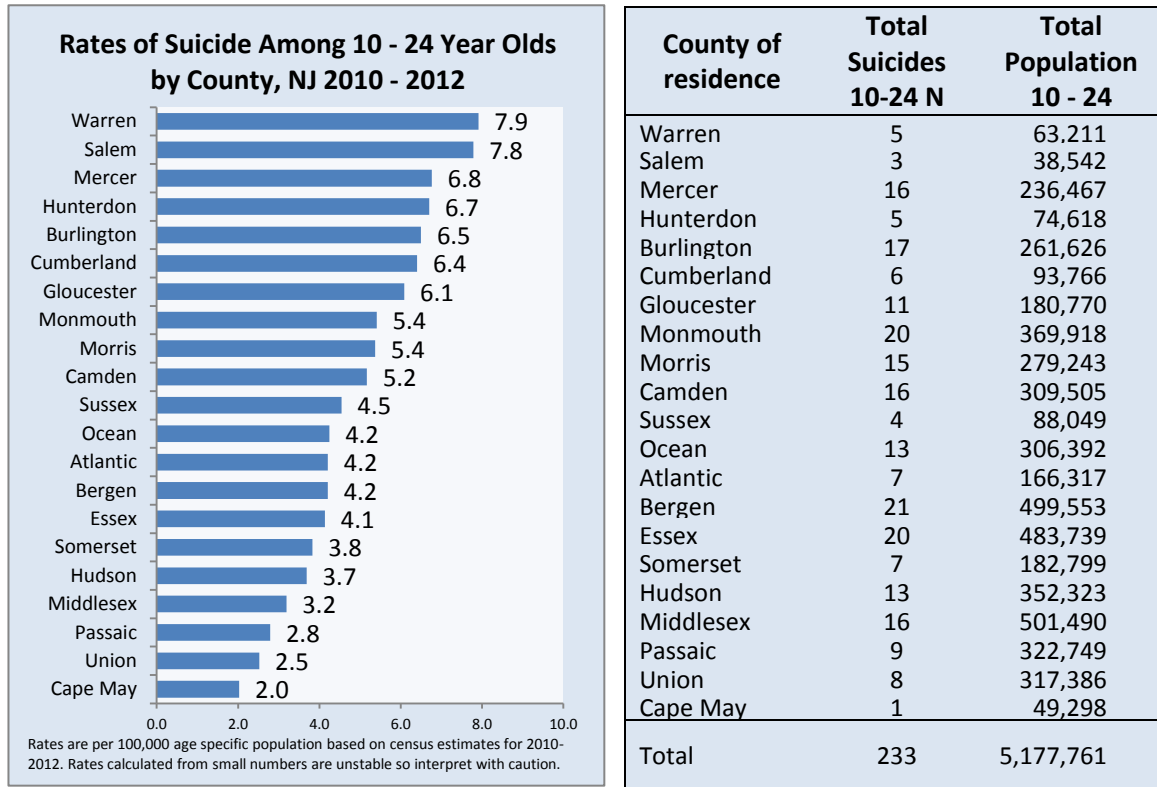


New Jersey County Data

The New Jersey Department of Health captured data regarding the number of youth (ages 10-24) suicides over the past three years by county. Data provided on chart 4 does not calculate suicide rates for fewer than 20. In an effort to compare suicide rates in the context of each county's youth (10-24) population, DCF obtained estimates from the 2011 U.S. Census Bureau, Population Division. DCF calculated age-specific rates per 100,000 individuals, using each county's population as the denominator. This data, captured on chart 4 shows youth suicide rate, number of total suicides and total population for each county.

The rate of suicide depends on the total population in each county. As such, the counties of Warren (rate: 7.9, total suicides: 5, total population: 63,211), Salem (rate: 7.8, total suicides: 3, total population: 38,542) and Mercer (rate: 6.8, total suicides: 16, total population: 236,467) appear to have the highest rate of suicide among youth ages 10-24 because they have smaller population sizes. In comparison, Bergen (rate: 4.2, total suicides: 21, total population: 499, 553), Essex (rate: 4.1, total suicides: 20, total population: 483,739) and Monmouth (rate: 5.4, total suicides: 20, total population: 369,918) appear to have lower rates.

Chart 4, Rates and Number of Suicides Among 10-24 Year olds by County, NJ 2010-2012



Life Circumstance

NJVDRS collects data on circumstance/life condition of youth (ages 10-24) who attempt or commit suicide. Table 4 provides data captured from 2010-2011, which reveals mental health, relationships and substance abuse are prevalent challenges for youth that committed suicide.

- Data reveals that 82% of the 154 suicides that took place over the last two years were committed by youth who had some form of mental health problem. However, about 1/4 of those youth (22%) were actively receiving mental health treatment at the time of their suicide.
- Nearly half (47%) of the 154 suicides that took place over the last two year were committed by youth who had some type of relationship problem. As it pertains to relationships, 29% reported intimate partner problems, and 18% indicated “other” as a relationship problem.
- Male youth who committed suicide (23%) reported substance abuse problems at a higher rate than females (6%). Male youth ages 10-18 reported (39%) experiencing a school problem, while overall for males and females combined the rate was only 14%.

A number of New Jersey youth who committed suicide over the last two years either left a note and/or disclosed in advance their intent to commit suicide. Over a third of youth (38%) left a suicide note, while nearly one out of four (24%) disclosed in advance their intent to commit suicide. Approximately 1/3 of male youth ages 10–18 disclosed intent prior to committing the act of suicide.

Table 4. Suicide circumstances by age group, New Jersey, 2010-2011

Suicide Circumstance	Age Group & Gender													
	Male						Female						Total	
	10-18		19-24		10-24		10-18		19-24		10-24		10-24	
	N	%*	N	%*	N	%*	N	%*	N	%*	N	%*	N	%*
Current mental health problem	16	48%	26	37%	42	40%	5	38%	10	53%	15	47%	57	42%
History of mental health treatment	17	52%	25	35%	42	40%	4	31%	8	42%	12	38%	54	40%
Current mental health treatment	9	27%	13	18%	22	21%	2	15%	6	32%	8	25%	30	22%
Current depressed mood	6	18%	13	18%	19	18%	5	38%	5	26%	10	31%	29	21%
Crisis within 2 weeks	8	24%	14	20%	22	21%	2	15%	3	16%	5	16%	27	20%
Substance abuse problem	6	18%	18	25%	24	23%	0	0%	2	11%	2	6%	26	19%
Alcohol problem	1	3%	9	13%	10	10%	0	0%	1	5%	1	3%	11	8%
Suicide note	9	27%	29	41%	38	37%	6	46%	7	37%	13	41%	51	38%
Disclosed intent	10	30%	17	24%	27	26%	0	0%	5	26%	5	16%	32	24%
History of suicide attempts	6	18%	15	21%	21	20%	3	23%	6	32%	9	28%	30	22%
Other suicide circumstance	21	64%	29	41%	50	48%	6	46%	11	58%	17	53%	67	49%
Intimate partner problem	9	27%	19	27%	28	27%	5	38%	6	32%	11	34%	39	29%
Other relationship problem	12	36%	6	8%	18	17%	6	46%	1	8%	7	22%	25	18%
School problem	13	39%	3	4%	16	15%	2	15%	1	8%	3	9%	19	14%
Job problem	0	0%	7	10%	7	7%	1	8%	1	8%	2	6%	9	7%
Recent criminal legal problem	3	9%	4	6%	7	7%	0	0%	1	8%	1	3%	8	6%
Recent death of friend or family	3	9%	2	3%	5	5%	1	8%	0	0%	1	3%	6	4%
Legal problem	2	6%	2	3%	4	4%	1	8%	0	0%	1	3%	5	4%
Financial problem	0	0%	4	6%	4	4%	0	0%	0	0%	0	0%	4	3%
Perpetrator of interpersonal violence	1	3%	2	3%	3	3%	0	0%	0	0%	0	0%	3	2%
Physical health problem	1	3%	1	1%	2	2%	0	0%	0	0%	0	0%	2	1%
Recent suicide of friend or family	1	3%	1	1%	2	2%	0	0%	0	0%	0	0%	2	1%
Victim of interpersonal violence	2	6%	0	0%	2	2%	0	0%	0	0%	0	0%	2	1%
Number of suicides in age group	36		84		120		13		21		34		154	
Suicides w/ known circs	33	92%	71	85%	104	87%	13	100%	19	90%	32	94%	136	88%

*Percent of suicides with **known** circumstances

Attempted Suicides

According to the CDC, a suicide attempt is a non-fatal, self-directed, potentially injurious behavior with an intent to die as a result of the behavior. A suicide attempt may or may not result in injury. Suicidal behavior includes thoughts of and plans for suicide, nonfatal suicide attempts and suicide deaths.

The New Jersey Department of Education (NJDOE) conducts a student health survey of self-reported health behaviors using a core of questions from the Youth Risk Behavior Survey, developed by the CDC for high school students. A select number of questions related to suicide risk behavior are included in the survey, and the most recent 2011 report was reviewed for this report. The 2011 Student Health Survey Report indicates that the national rate of youth who attempted suicide at least once during the 12 months before the survey was 7.8. New Jersey's rate was 6.0. The results of the survey also showed that youth across the United States were more likely to have seriously considered attempting suicide than youth in New Jersey.

Attempted Suicide Treatment - Age & Gender

Table 5 captures the 2010-2012 rates of non-fatal suicide attempts/self-inflicted injuries that received treatment through emergency room visits and in-patient hospitalizations for youth ages 10-24.

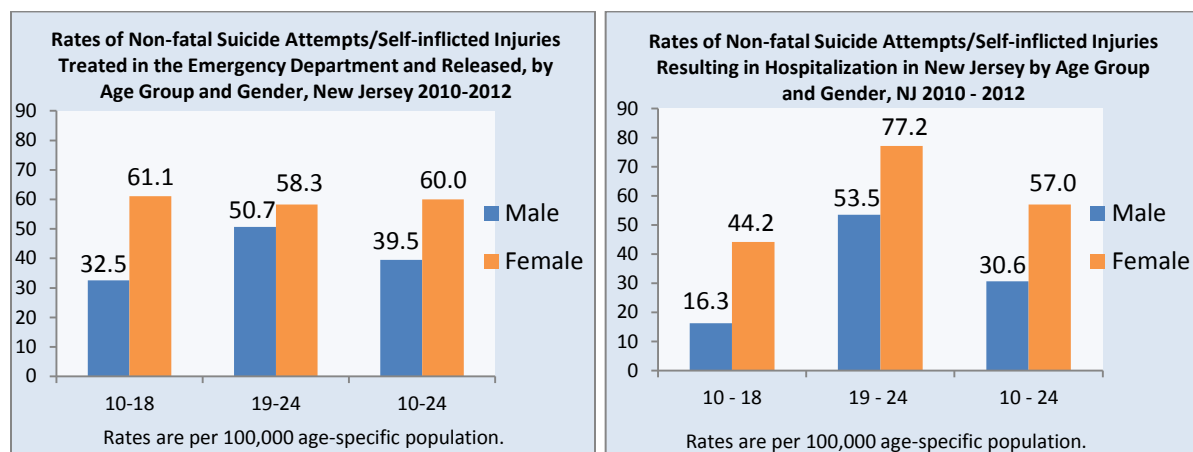
- Inpatient hospitalization is defined as a “time-limited, structured, active treatment program . . . that is necessary for stabilization of the acutely ill psychiatric patient.”¹
- Emergency room departments “conduct a medical clearance rather than treat acute behavioral disorders. From the emergency department, patients with significant mental illness may be transferred to a psychiatric unit.”²

A youth may visit the emergency room for a complaint of mental illness and/or because he/she may pose a danger to himself/herself or others. The youth maybe brought to the emergency room by a parent or law enforcement for psychiatric examination.

Data revealed that in both hospitals and emergency departments, females (ages 10-24) were much more likely to attempt suicide than males (ages 10-24). However, data regarding youth 19–24 years old treated in the emergency room indicates little difference between how often males (50.7) are treated for suicide attempts compared to females (58.3).

Rates of suicide attempts for youth ages 10–24 treated in the hospital compared to the emergency room are similar. The rate of suicide attempts for youth ages 10–18 indicate a lower rate of males treated through hospitalization. In comparison, female youth ages 19–24 are more likely to be treated via hospitalization. Overall, youth ages 10-18 are more likely to be treated in the emergency room and older youth ages 19-24 are more likely to be hospitalized.

Chart 5, Rates of Non-fatal Suicide Attempts/Self-inflicted – Emergency Department vs. Hospitalization by Age Group & Gender NJ 2010-2012³



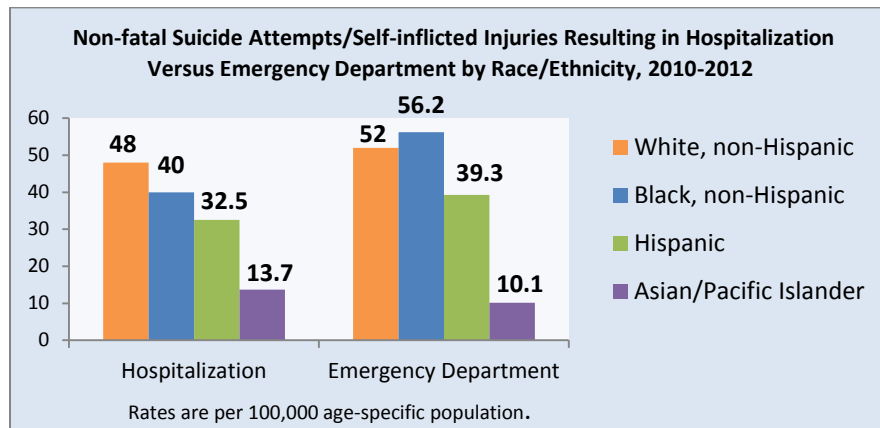
¹⁵ www.bjcbbehavioralhealth.org/behavioralhealth_content.aspx?id=1931;

¹⁶ en.wikipedia.org/wiki/Emergency_department Cached

Race and Ethnicity

Data collected by hospitals about a patient’s race and ethnicity is not consistently captured. Accordingly, the reliability of such data is in question. However, the data captured reveals non-Hispanic white youth are most likely to be treated for attempted suicide through hospitalization. Non-Hispanic black youth are most likely to be treated via the emergency room.

Chart 6, Non-fatal Suicide Attempts/Self Inflicted Injuries Resulting in Hospitalization vs. Emergency Department by Race/Ethnicity, 2010-2012



Primary Method

The 2010-2012 data revealed in table 5 for youth (ages 10-24) indicate the most common method of non-fatal suicidal attempts involved poison. There were 2,248 non-fatal suicidal attempts that resulted in hospitalization, of which 93% (2,101) were poisoning cases. As it pertains to youth treated via the emergency room for non-fatal suicidal attempts, 57% were identified as poisoning cases. Data clarity regarding method via emergency rooms is lacking because “other or not specified” is used at a higher rate than with hospitalization cases.

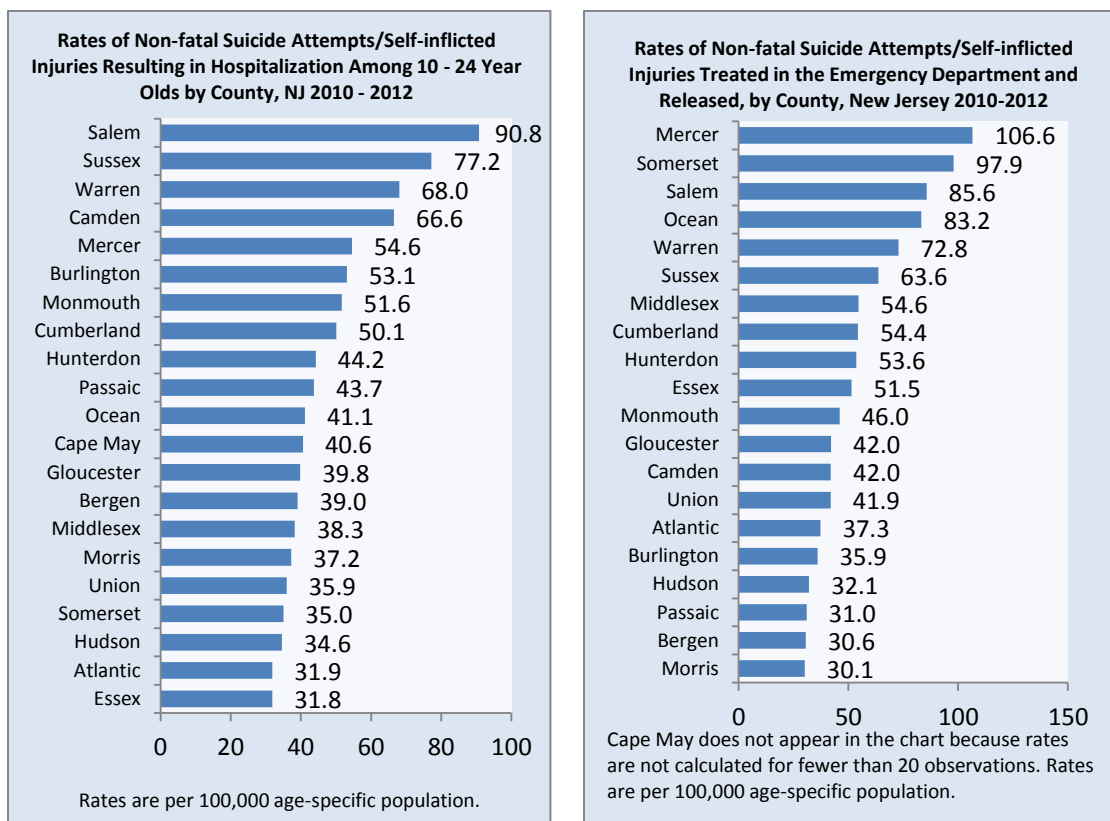
Table 5, Method/Weapon – Hospital vs. Emergency Department

Method/Weapon	Hospital		Emergency Department	
	N	%	N	%
Poisoning	2101	93%	1471	57%
Other or Not Specified	46	2%	538	21%
Cut/Pierce	55	2%	519	20%
Fall	26	1%	20	1%
Hang, Strang, Suff	11	0.5%	13	1%
Firearm	7	0.3%	0	0%
Unknown Weapon	2	0.1%	0	0%
Total	2248	100%	2561	100%

County

The charts below show the rate in each county of non-fatal suicide attempts/self-inflicted injuries resulting in hospitalization and emergency department treatment for youth ages 10-24 from 2010-2012 in New Jersey. As concluded above with suicide completion data, the rate of non-fatal suicide attempts/self-inflicted injuries may be lower or higher based on the total population in each county. With that in mind, the data indicates that the three counties with the highest rate of suicide attempt/self-inflicted injuries per 100,000 youth were less populated, while heavily populated counties reveal a lower rate.

Chart 7, Rates of Non-fatal Suicide Attempts/Self-inflicted Injuries in Hospitalization vs. Emergency Department Among 10-24 Year Olds by County, NJ 2010-2012



References for Data, Tables and Figures

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