

# **New Jersey Violent Death Reporting System (NJVDRS)**

## **Center for Health Statistics and Informatics**

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**Trenton War Memorial, Trenton, NJ**

**September 12, 2017**

**SUICIDE IN NEW JERSEY  
NATIONAL SUICIDE PREVENTION WEEK EVENT  
DHS, DMHAS AND DCF, DFPCP**



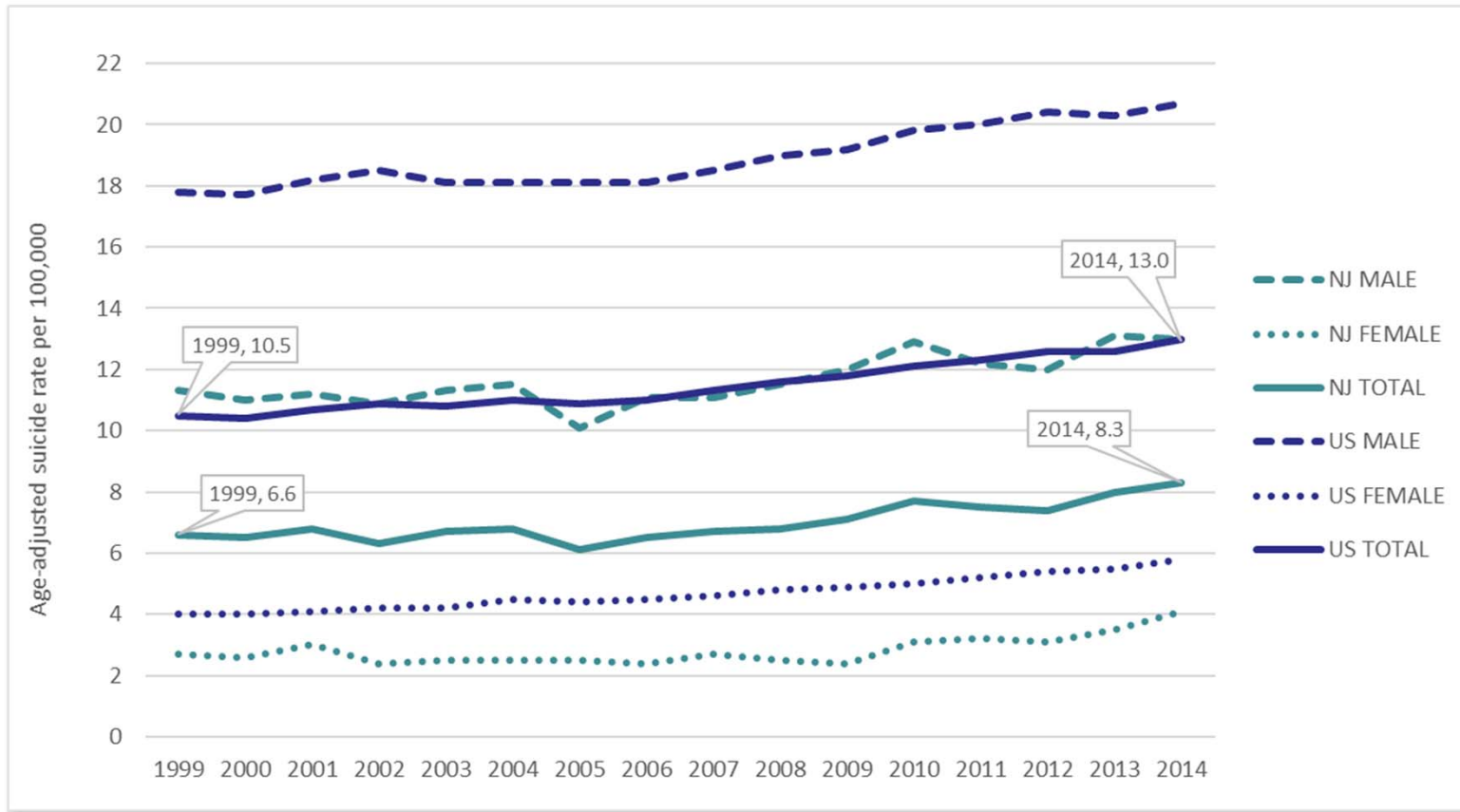
# Suicide in New Jersey

- New Jersey generally has one of the lowest suicide rates in the nation, but like the rest of the country has experienced a steady increase in the last 15 years.
- Every day, on average, 2.2 New Jersey residents die by suicide.
- Suicide is the 3<sup>rd</sup> leading cause of death among those aged 15-24, and the 4<sup>th</sup> leading cause of death for those aged 35-44.
- For every NJ resident suicide, there are another 5.5 inpatient hospitalizations or emergency room discharges for non-fatal suicide attempts and self-inflicted injuries, consuming substantial healthcare resources.
  - In 2015, there were 1,837 ED visits, with an average cost of \$7,174 per visit. Treatment costs exceed \$13.1 million.
  - In the same year, there were another 2,550 inpatient hospitalizations for more serious self-inflicted injuries, with an average length of stay of 5.2 days and an average cost per stay of \$67,931, with an annual total of \$173.2 million.
  - 97% and 99%, respectively, were discharged ALIVE.

*New Jersey Hospital Discharge Data System; Center for Health Statistics, Healthcare Quality and Informatics; New Jersey Department of Health (11/22/2016)*



# NCHS-NJ Figure 1. Age-adjusted suicide rates, by sex: United States & New Jersey, 1999-2014



National mortality data from NCHS Data Brief No. 241, April 2016; New Jersey mortality data from Center for Health Statistics and Informatics, April 2016; Bridged-race Estimates for population.

To view the whole report: [http://www.state.nj.us/health/chs/documents/suicide\\_nj1999-2014.pdf](http://www.state.nj.us/health/chs/documents/suicide_nj1999-2014.pdf)



# National Center for Health Statistics

## Data Brief No. 241, April 2016

### “Increase in Suicide in the United States, 1999-2014”

**NJVDRS produced a companion piece for this NCHS data brief, posted May 2016, highlighting New Jersey.**

- From 1999 to 2014, the national suicide rate **increased** from 10.5 to 13.0 per 100,000, up **24%** (1).
- The suicide rate in New Jersey **increased** almost **26%** from 1999 to 2014 (6.6 to 8.3 per 100,000).
  - While New Jersey historically has some of the lowest suicide rates in the country, *increases* in overall and group suicide rates that *track closely with national trends* (2).
- The suicide rate for **males** in New Jersey in 2014 was 13.0 per 100,000, **more than triple the female rate** of 4.1 per 100,000, similar to the national pattern.
- The **increase in the female suicide rate** in New Jersey from 1999 to 2014 (from 2.7 to 4.1 per 100,000; **52%**) was much **greater** than the **increase in the male suicide rate** (from 11.3 to 13.0 per 100,000; **15%**), and **greater** than the increase in female suicide recorded **nationally (45%)**.
- Suicide rates for **females of all age groups** were **higher** in 2013-2014 than in 1999-2000 except for 75 and older.
- The **largest rate increase** is seen among **New Jersey females aged 45-64 years**, which went from 3.8 per 100,000 in 1999-2000 to 6.6 per 100,000 in 2013-2014, an increase of **74%**, even larger than the **national increase of 63%**.
- In New Jersey, the **highest suicide rates** were seen in **males aged 75 and older**. These **rates were virtually identical** at the start and end of the time period (24.5 per 100,000 in 1999-2000, 24.4 per 100,000 in 2013-2014). **Nationally**, this group experienced an **8% decrease**, dropping to 38.8 per 100,000 in 2014 from 42.4 per 100,000 in 1999.
- Among **New Jersey males**, the **largest rate increase** is seen among **males ages 45-64**, where the rise in suicide from 14.9 per 100,000 in 1999-2000 to 20.3 per 100,000 in 2013-2014 represents a **36%** increase in the suicide rate. In comparison, the suicide rate among males in this age group **nationally increased by 43%**.

To view the whole report:

[http://www.state.nj.us/health/chs/documents/suicide\\_nj1999-2014.pdf](http://www.state.nj.us/health/chs/documents/suicide_nj1999-2014.pdf)

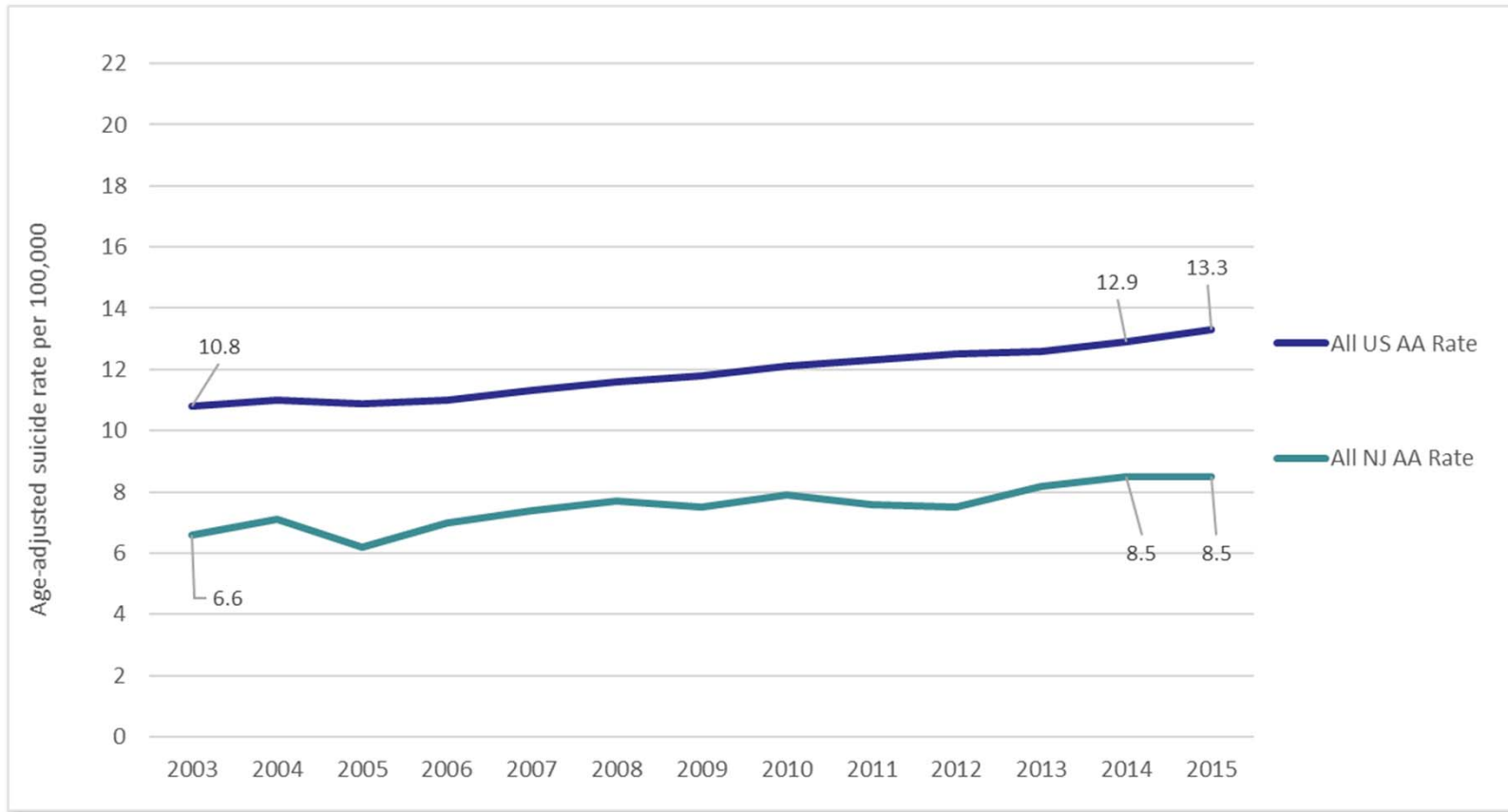


# Overview of the NJVDRS

- New Jersey Violent Death Reporting System (NJVDRS) established at the Center for Health Statistics and Informatics at the New Jersey Department of Health since 2002 – we were among the first six pilot states
  - *Supported by CDC Cooperative Agreement 5U17CE002611-03.*
- The National Violent Death Reporting System has now expanded to 42 states and territories, including Puerto Rico and Washington, DC
- Link data from different sources to create a single record, capturing all victims of violent death and suspects (if applicable) so they can be analyzed together
  - *NJDOH- Office of Vital Statistics and Registry*
  - *Office of the State Medical Examiner (OSME)*
  - *Local Law Enforcement, New Jersey State Police, ROIC*
  - *Child Fatality Review*
  - *County Prosecutor's Offices*
- Data abstractors code standardized circumstances and situational characteristics from these reports



# NJVDRS Figure 1. Age-adjusted suicide rates: United States & New Jersey, 2003-2015



US data from CDC/WISQARS; NJVDRS v.09082017, Center for Health Statistics and Informatics; Bridged-race Estimates for population. Rates are calculated per 100,000 and age-adjusted using the 2000 US Standard Population.



# NJVDRS Table 1. NJ Suicide Rate-Detail

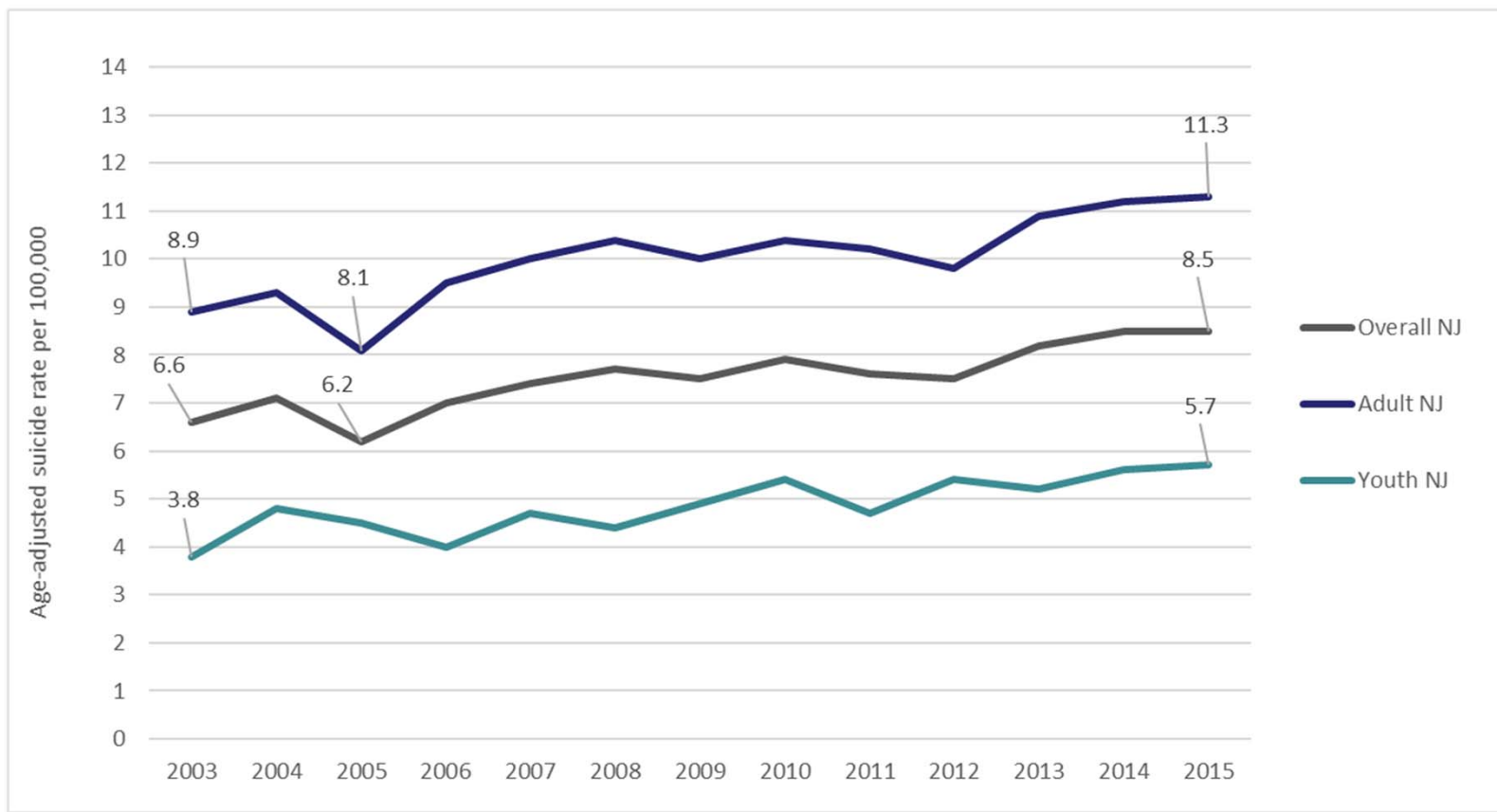
Year	Overall Suicide Count	AA Rate per 100,000	% Rate change	Adult Suicide Count	AA Rate per 100,000	% Rate change	Youth Suicide Count	AS Rate per 100,000	% Rate change
2003	583	6.6		519	8.9		64	3.8	
2004	622	7.1	+7.5%	540	9.3	+4.5%	82	4.8	+26.3%
2005	552	6.2	-12.7%	475	8.1	-12.9%	77	4.5	-6.3%
2006	627	7.0	+12.9%	559	9.5	+17.3%	68	4.0	-11.1%
2007	666	7.4	+5.7%	585	10.0	+5.3%	80	4.7	+17.5%
2008	694	7.7	+4.1%	618	10.4	+4.0%	76	4.4	-6.4%
2009	682	7.5	-2.6%	598	10.0	-1.0%	84	4.9	+11.4%
2010	738	7.9	+5.3%	645	10.4	+4.0%	93	5.4	+10.2%
2011	710	7.6	-3.8%	628	10.2	-1.9%	82	4.7	-13.0%
2012	691	7.5	-1.3%	598	9.8	-3.9%	93	5.4	+14.9%
2013	771	8.2	+9.3%	682	10.9	+11.2%	89	5.2	-3.7%
2014	799	8.5	+3.7%	702	11.2	+2.8%	97	5.6	+7.8%
2015	803	8.5	same	706	11.3	+0.9%	97	5.7	+1.8%

NJVDRS v.09082017, Center for Health Statistics and Informatics; Bridged-race Estimates for population. Rates are calculated per 100,000 and age-adjusted using the 2000 US Standard Population.

“Adults” in this figure are persons age 25 years and over. “Youth” are persons age 10-24 years.



## NJVDRS Figure 2. Suicide rates for youth, adult, and overall, New Jersey, 2003-2015



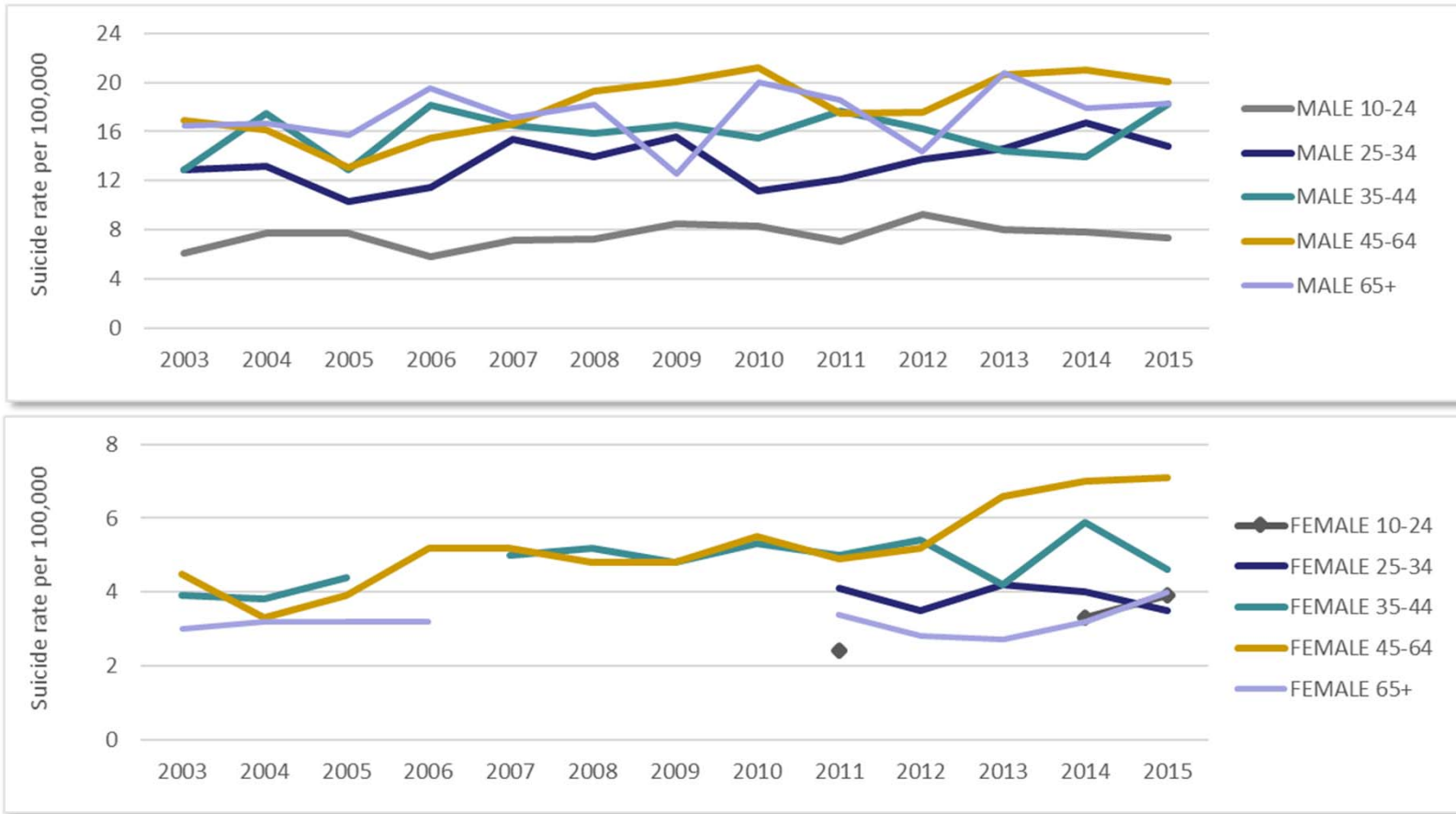
NJVDRS v.09082017, Center for Health Statistics and Informatics; Bridged-race Estimates for population. Rates are calculated per 100,000 and age-adjusted using the 2000 US Standard Population.

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# NJVDRS Figure 3. Suicide rates by age group and gender, New Jersey, 2003-2015

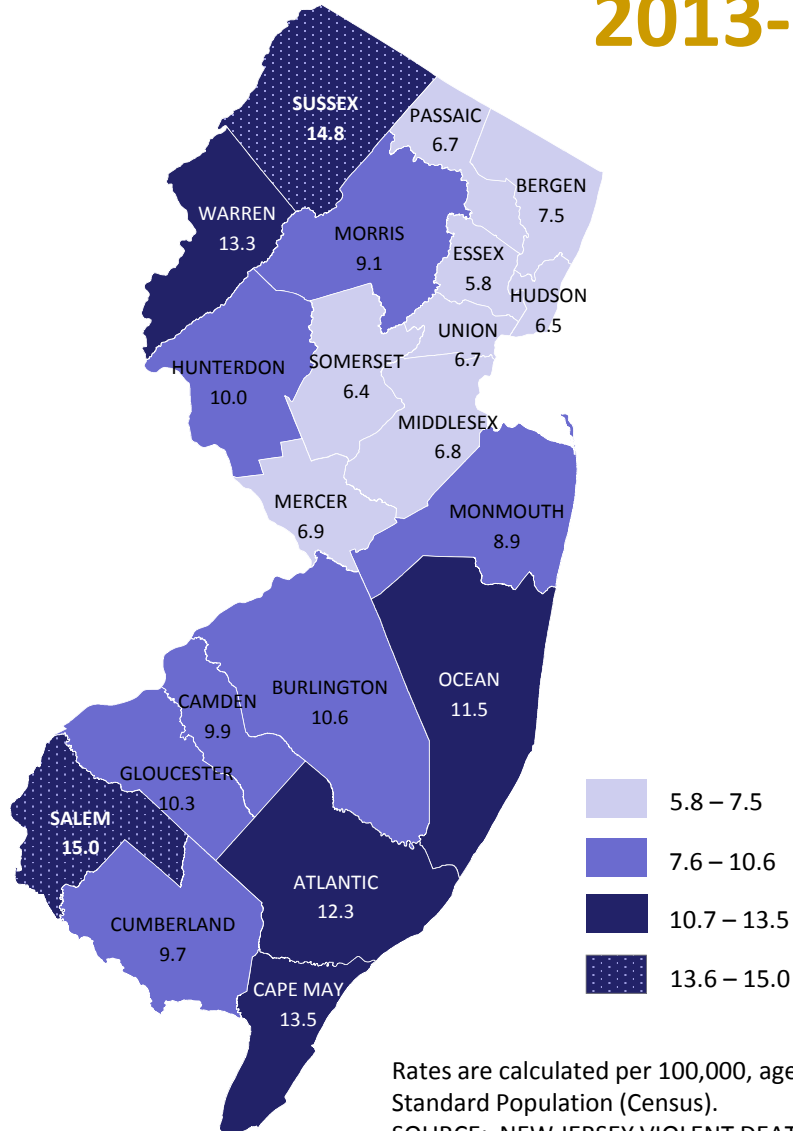


NJVDRS v.09082017, Center for Health Statistics and Informatics; Bridged-race Estimates for population. Rates are calculated per 100,000 and age-adjusted using the 2000 US Standard Population.

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# NJVDRS Figure 4. County suicide rates, 2013-2015



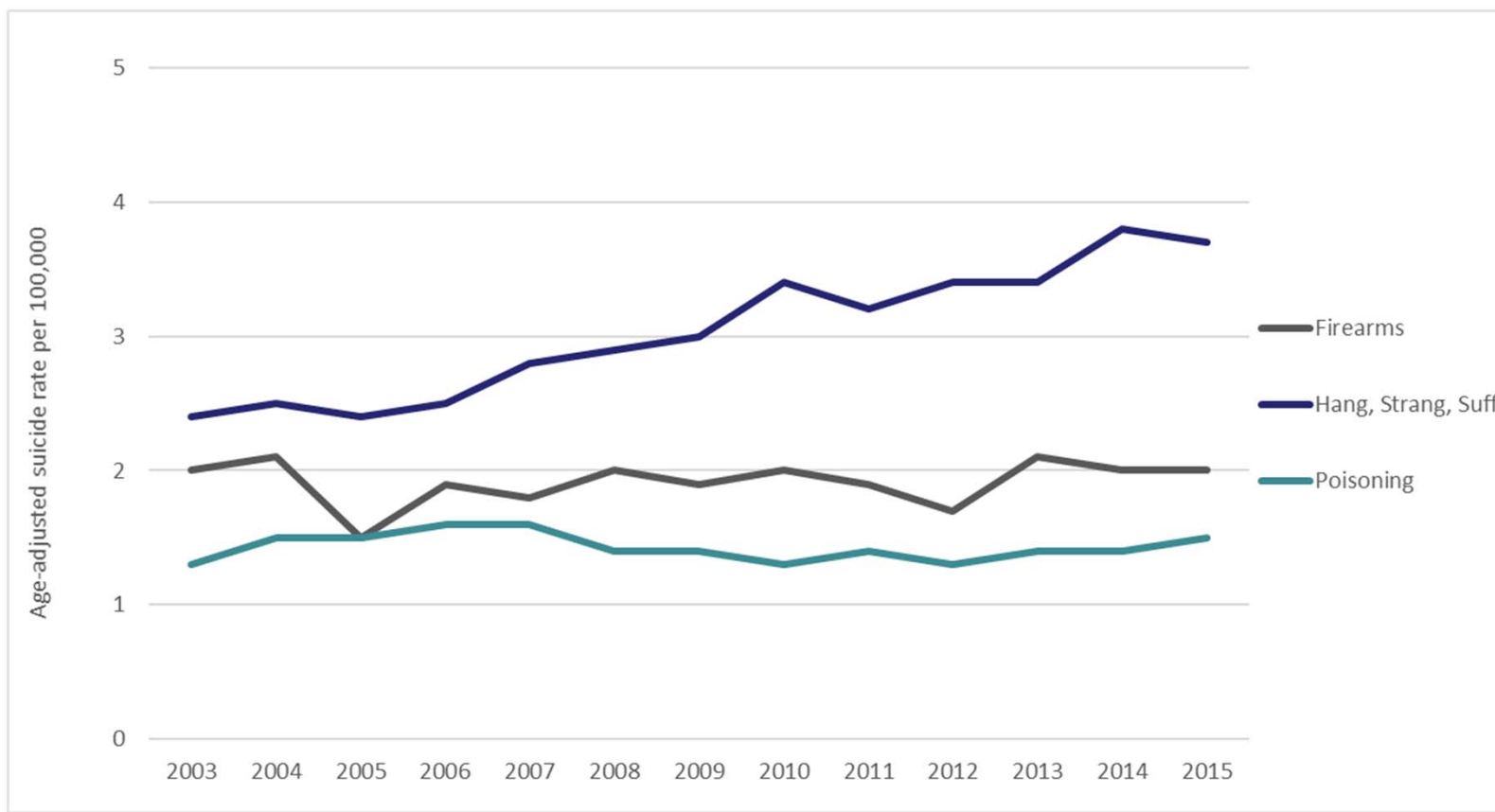
- Suicide rates tend to be higher in more rural, less populated counties.
  - The highest 3-year rates bounce between Sussex, Salem, Warren, Cape May counties
- Compared to 2011-2013, the counties with the highest increases in suicide rates are Sussex, Burlington, Morris, and Ocean.
- The only counties with decreases in suicide rates from 2011-2013 are Salem, Gloucester, and Middlesex.

Rates are calculated per 100,000, age-adjusted using the 2000 US Standard Population (Census).

SOURCE: NEW JERSEY VIOLENT DEATH REPORTING SYSTEM, V.09/08/2017, NEW JERSEY DEPARTMENT OF HEALTH



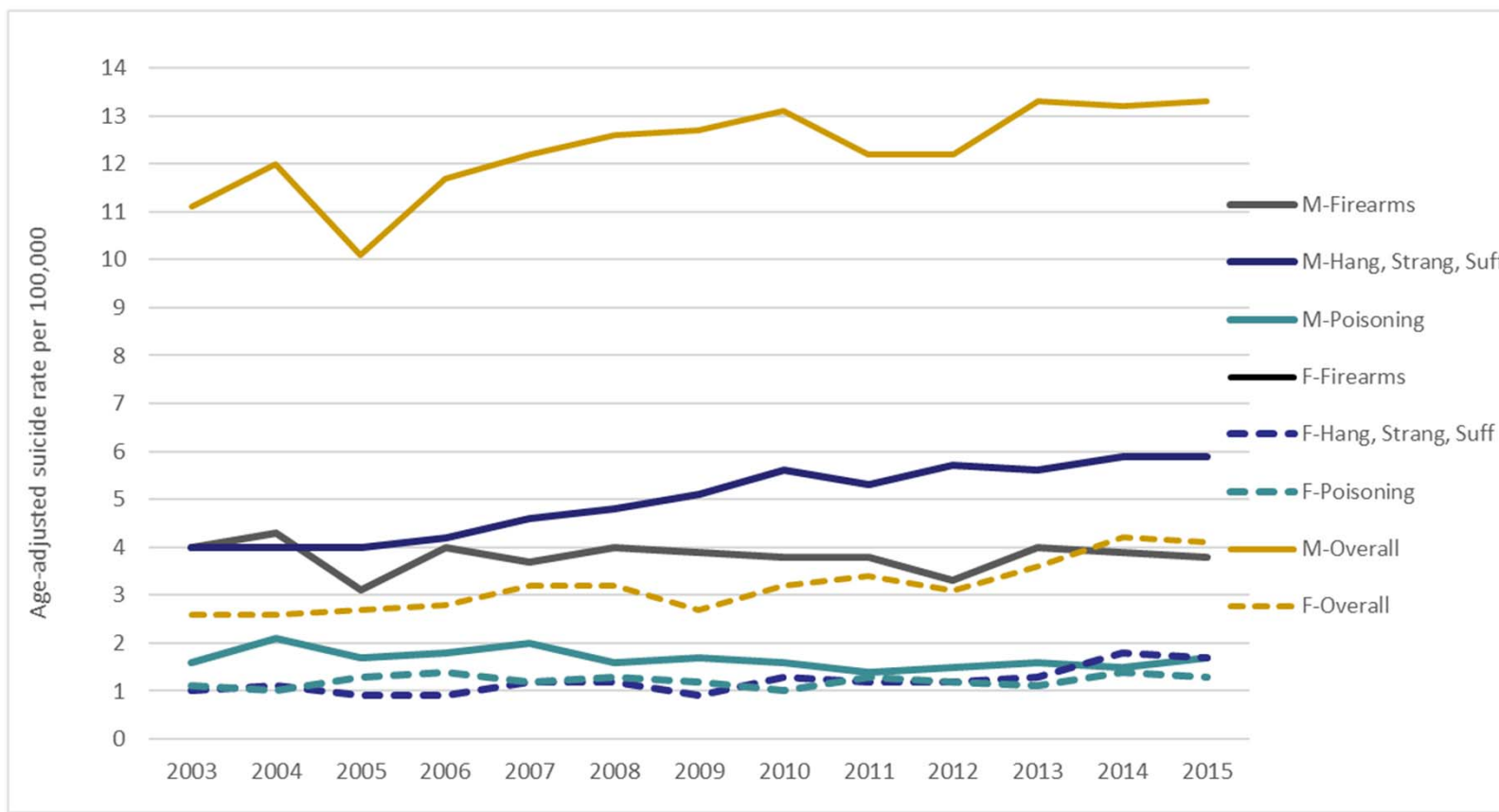
## NJVDRS Figure 5. Suicide weapon trends, New Jersey, 2003-2015



*NJVDRS v.09082017, Center for Health Statistics and Informatics; Bridged-race Estimates for population.  
Rates are calculated per 100,000 and age-adjusted using the 2000 US Standard Population.*



## NJVDRS Figure 6. Suicide weapon trends, by gender, New Jersey, 2003-2015



NJVDRS v.09082017, Center for Health Statistics and Informatics; Bridged-race Estimates for population. Rates are calculated per 100,000 and age-adjusted using the 2000 US Standard Population.

NOTE: There is no line for Female Firearm on this graph- no single year had more than 20 female firearm suicides, so rates are not calculated.



## NJVDRS Circumstances

- Circumstance Variables – information abstracted from narratives
  - “Suicide” circumstances include:
    - Crisis in past or upcoming two weeks, plus details of what that crisis is
    - Current/past mental health problems and treatment
    - Problems with substance abuse and/or alcohol abuse
    - Other circumstances
      - Physical Health Problems
      - Intimate Partner Problems
      - Financial, job, school problems; current or impending homelessness
      - Suicide notes, disclosure of intent, previous attempts
  - “Homicide” circumstances include:
    - Precipitated by another crime such as robbery, other assaults
    - Jealousy, Lover’s Triangle, Intimate Partner Violence
    - Arguments over money, property
    - Drug involvement, gang-related, drive-by
    - Justifiable self-defense, law enforcement-involved deaths
    - Hate crimes, mentally ill suspects, random acts of violence
  - Many circumstances are global and can be endorsed for any death

# NJVDRS Table 2. Suicide Circumstances 2015

Circumstance	Overall	%	Adults	%	Youth	%
Total Suicide 2015	803		706		97	
Suicide with known circumstances	614	76.5%	551	78.1%	63	65.0%
Crisis in the last or upcoming 2 weeks	194	24.2%	169	23.9%	25	25.8%
Depressed mood	187	24.0%	170	24.1%	17	17.5%
Current mental health problem	300	37.4%	272	38.5%	28	28.9%
Current mental health treatment	223	27.8%	200	28.3%	23	23.7%
History of mental health treatment	287	35.7%	259	36.7%	28	28.9%
Substance abuse problem	98	12.2%	88	12.5%	10	10.3%
Alcohol problem	73	9.1%	70	9.9%	**	
History of suicide attempts	106	13.2%	93	13.2%	13	13.4%
Disclosed intent to another person	127	15.8%	111	15.7%	16	16.5%
Left a suicide note	221	27.5%	199	28.2%	22	22.7%
Intimate partner problem	141	17.6%	125	17.7%	16	16.5%
Physical health problem	113	14.1%	113	14.1%	**	
Job problem (overall, adults); School problem (youth)	66	8.2%	62	8.8%	10	10.3%

NJVDRS v.09082017, Center for Health Statistics and Informatics

\*\* Percent calculations not shown for fewer than 5 observations

“Adults” in this figure are persons age 25 years and over. “Youth” are persons age 10-24 years.



## Co-morbid circumstances with “Crisis”

- In youth, those 25 deaths with “Crisis” endorsed had a wide range of additional circumstances checked off. The most common co-morbid circumstances associated with a crisis:
  - Intimate partner problem (13)
  - Depressed mood (10)
  - Current mental health problem (9)
  - School problems (7) and substance abuse problems (7)
- Among adults, there were 169 deaths with “Crisis” endorsed, also with multiple co-morbid circumstances. The most common among adults:
  - Intimate partner problem (76)
  - Current mental health problem (75)
  - Depressed mood (66)
  - ***Disclosed intent (45)***
  - Physical health problems (43)
  - Arguments over money or property (34)
  - Substance abuse problems (33)

## “Substance Abuse” as a suicide circumstance

- Of the 98 suicides where “substance abuse” is reported:
  - The most common mechanism/weapon is hanging, strangling, suffocation (43, 43.9%)
  - Poisoning accounted for another 31 deaths (31.6%)
  - A firearm was the weapon in 16 (16.3%) of deaths.

***Cannot assume a drug overdose suicide is indicative of a substance abuse problem***

***Cannot assume a drug presence of opioids is indicative of a substance abuse problem***

- The Center for Health Statistics will be leveraging the NJVDRS system, including existing collaborations and data sources, to conduct surveillance on overdose deaths. “Enhanced Surveillance of Overdose in New Jersey (ESO-NJ)”
  - Explore risk factors for fatal unintentional drug overdoses using the existing NJVDRS platform
  - Collect detailed toxicology data on all drug overdose deaths
  - Improve our understanding of risk factors, possible intervention points, and emerging trends in the drug overdose environment
  - CDC’s funding begins September 1, 2017





## Contact us!

Bretta Jacquemin, MPH

New Jersey Violent Death Reporting System (NJVDRS)  
Enhanced Surveillance of Overdose in New Jersey (ESO-NJ)

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<https://www.cdc.gov/violenceprevention/nvdrs/>

*The New Jersey Violent Death Reporting System is supported by Cooperative Agreement 5U17CE002611-03 from the Centers for Disease Control and Prevention (CDC).*

(1) Curtin SC, Warner M, Hedegaard H. Increase in Suicide in the United States, 1999-2014. NCHS Data Brief, no 241. Hyattsville, MD: National Center for Health Statistics. 2016. <http://www.cdc.gov/nchs/data/databriefs/db241.pdf>

(2) Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2005) [cited 2016 Apr 26]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)





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