

UPDATE ON SUICIDAL BEHAVIOR IN CT: CTSAB 2015 ANNUAL MEETING

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Overview of Presentation

- Review of State suicide statistics
- Why is it important to target suicide prevention efforts?
- How do we do it?
 - What data are available
 - How to analyze it
- A demonstration

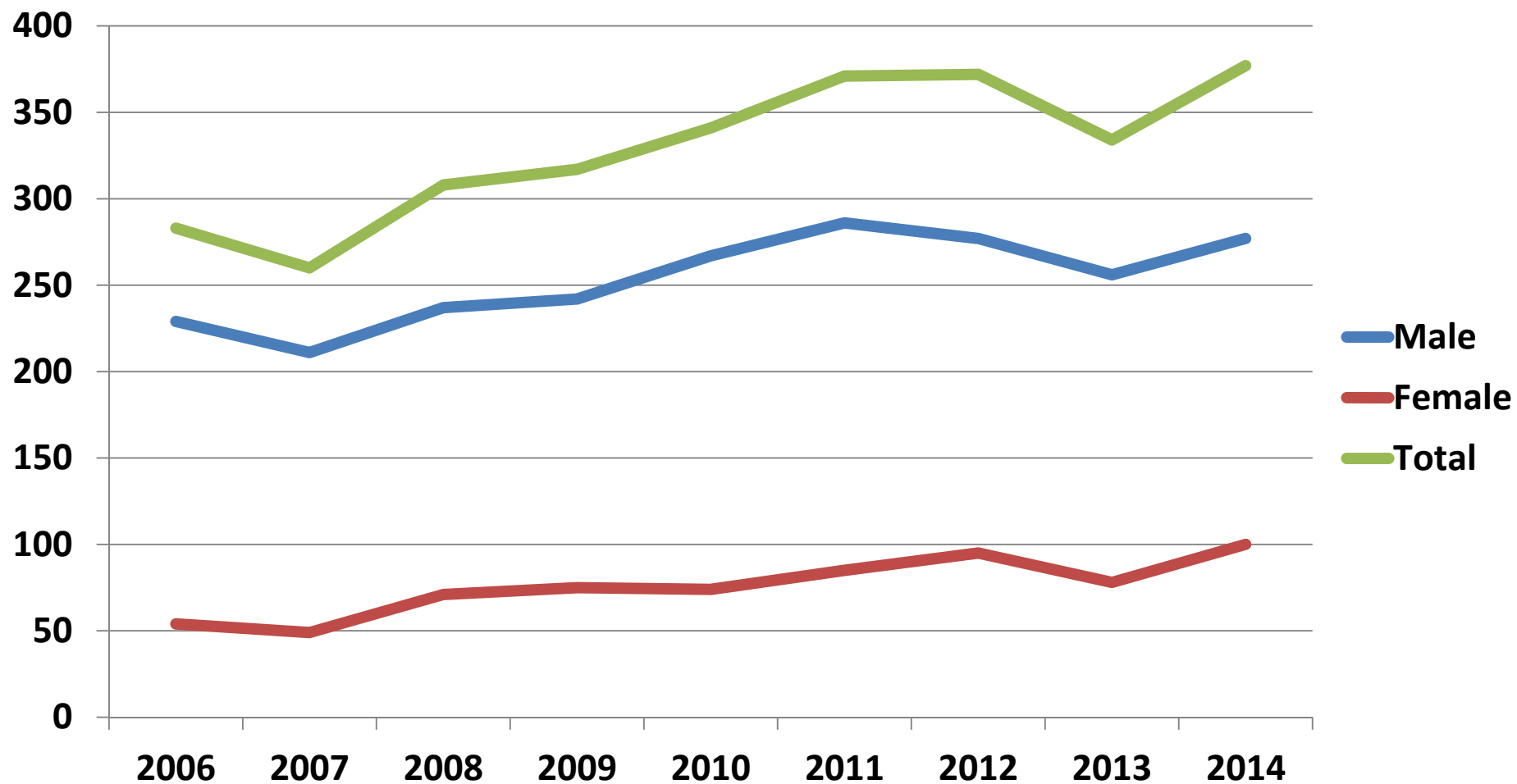
Available Data to Assess Suicide Risk

- Mortality Statistics – deaths by suicide
 - Medical examiner, death records
- Survey Data – self-reported suicidal behavior
 - NSDUH, YRBS
- Claims Data – medically serious suicide attempts
 - APCDs, hospital discharge data

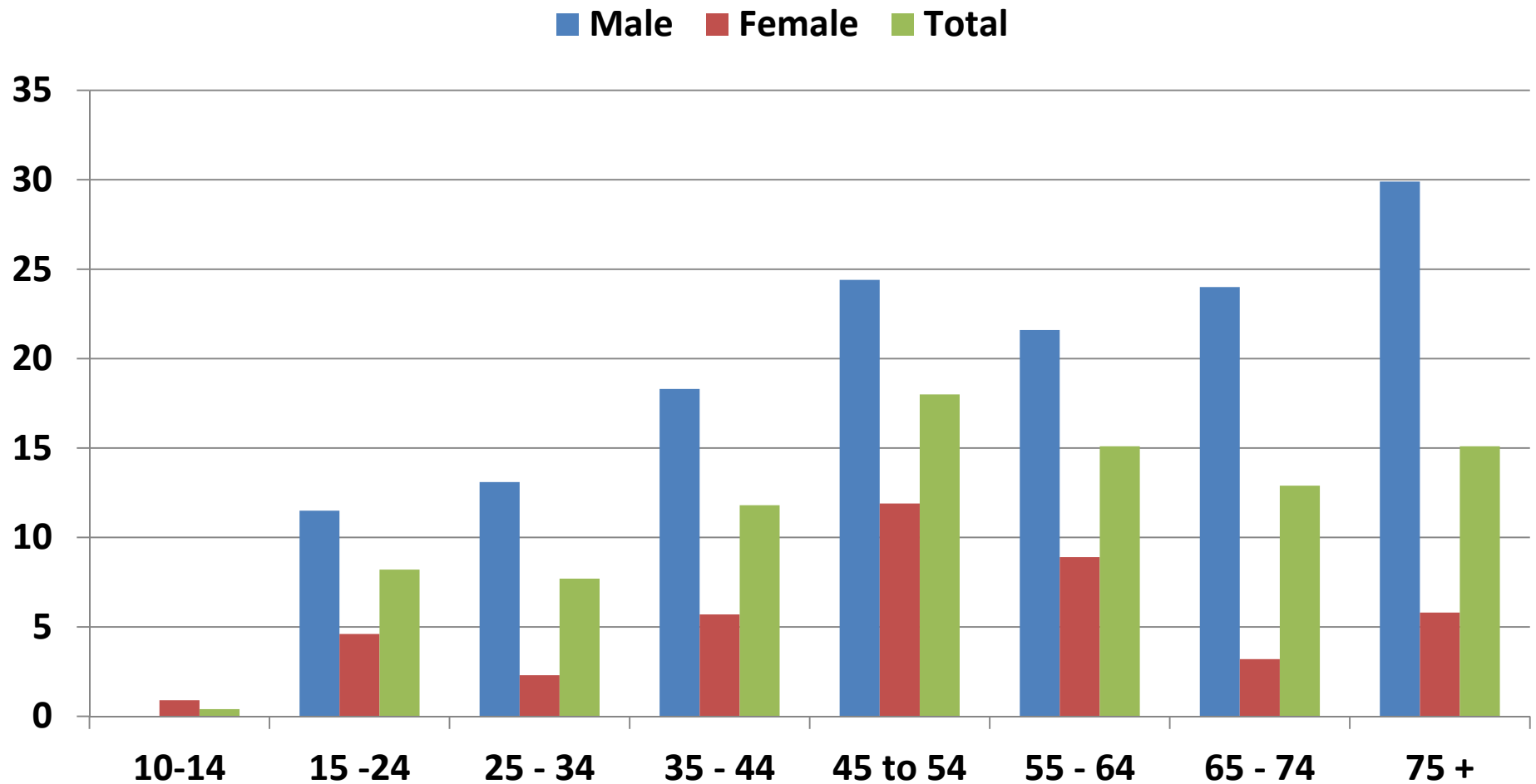
Average Number of Suicides In CT Per Year 2006-2014

- **Average Total: 329 (SD=41.15)**
- **Range: 260 (2007) to 377 (2014)**
- **Average Female: 76 (SD=16.82)**
- **Average Male: 254 (SD=25.39)**

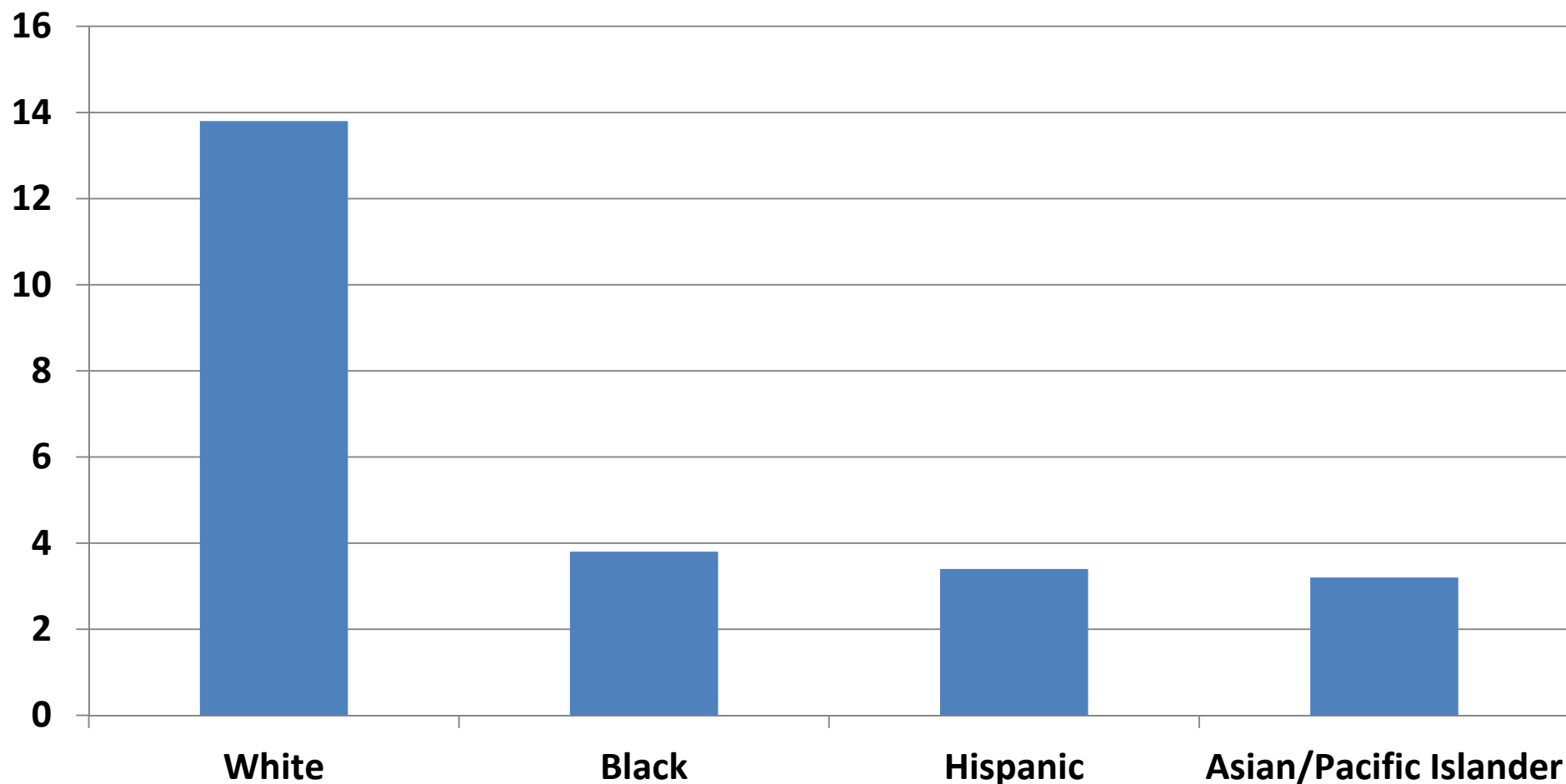
Number of Suicides In CT by Year 2006 - 2014



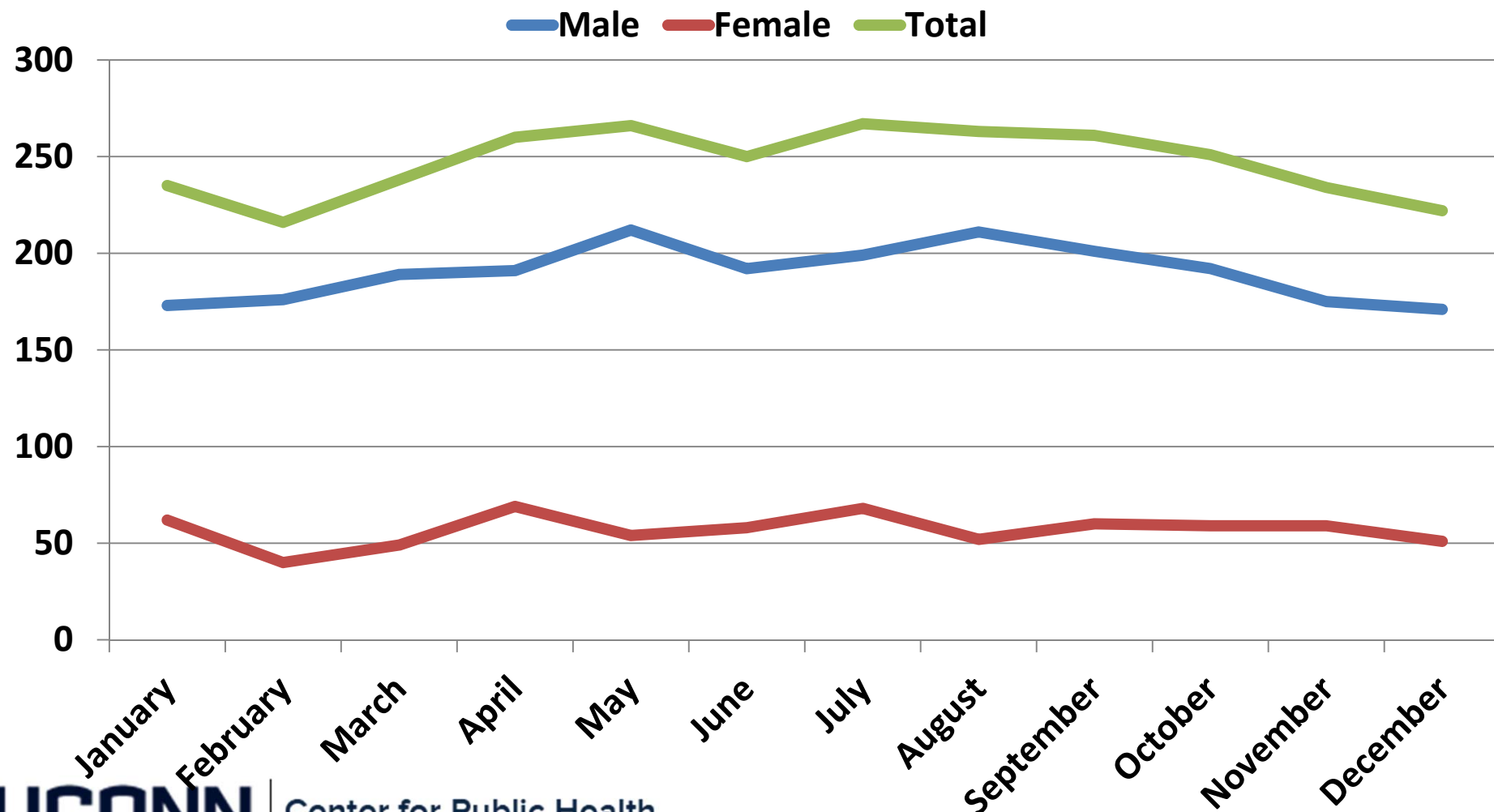
Connecticut Suicide Rate by Age Range 2014



Connecticut Suicide Rate by Race 2014



Number of Suicides by Month 2006 - 2014

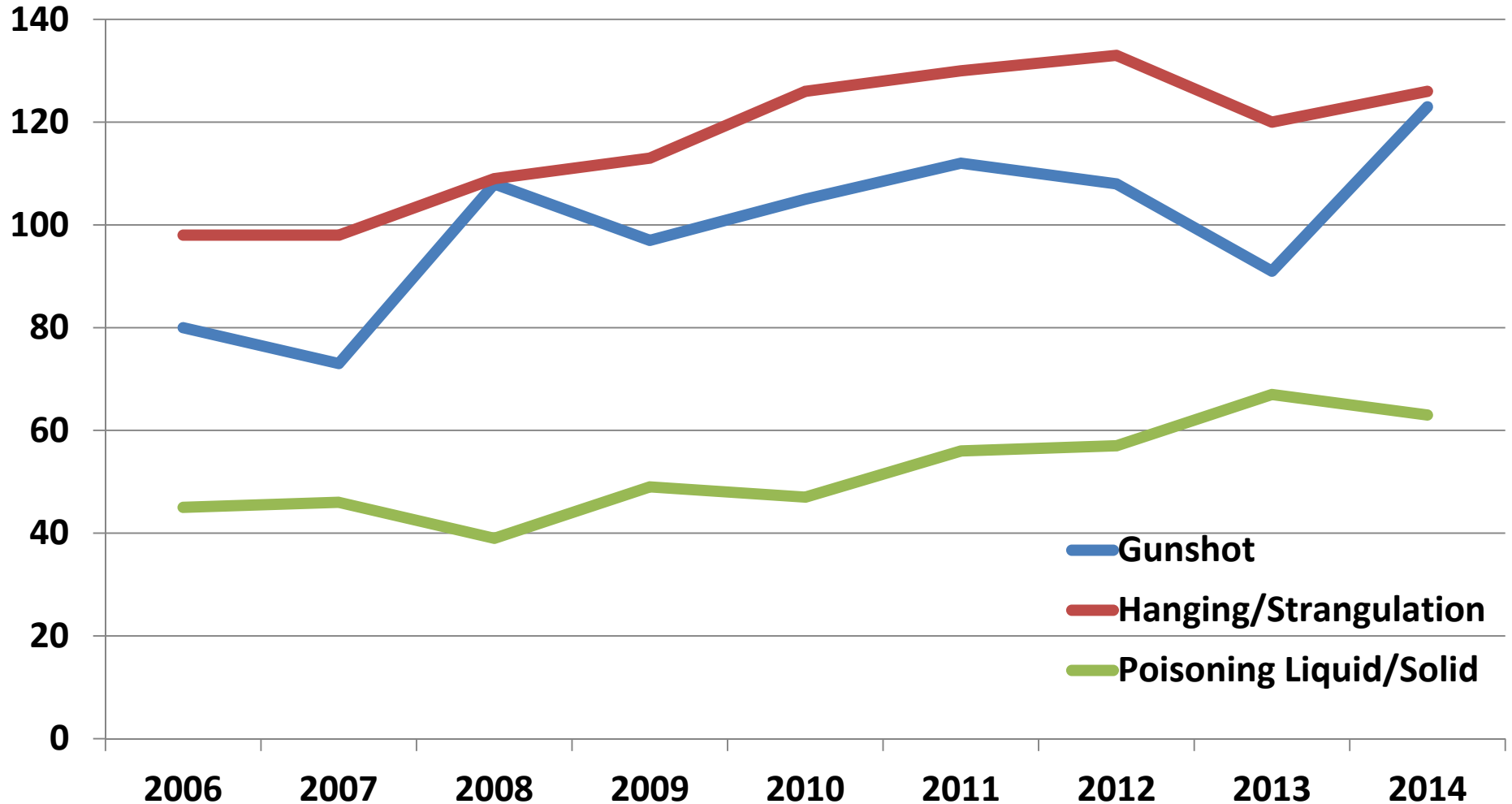


Methods of Suicide in CT 2014 (n=377)

Method of Suicide	n	Percent
Hanging/Strangulation	126	33.4
Gunshot	123	32.6
Poisoning Liquid/Solid	63	16.7
Poisoning Gas	19	5.0
Suffocation	13	3.4
Incision/Cut	8	2.1
Motor Vehicle/Train	8	2.1
Jump	8	2.1
Drowning	7	1.9
Self-Immolation	1	.3
Other	1	.3

Source: OCME

Primary Methods of Suicide in CT 2006 -2014



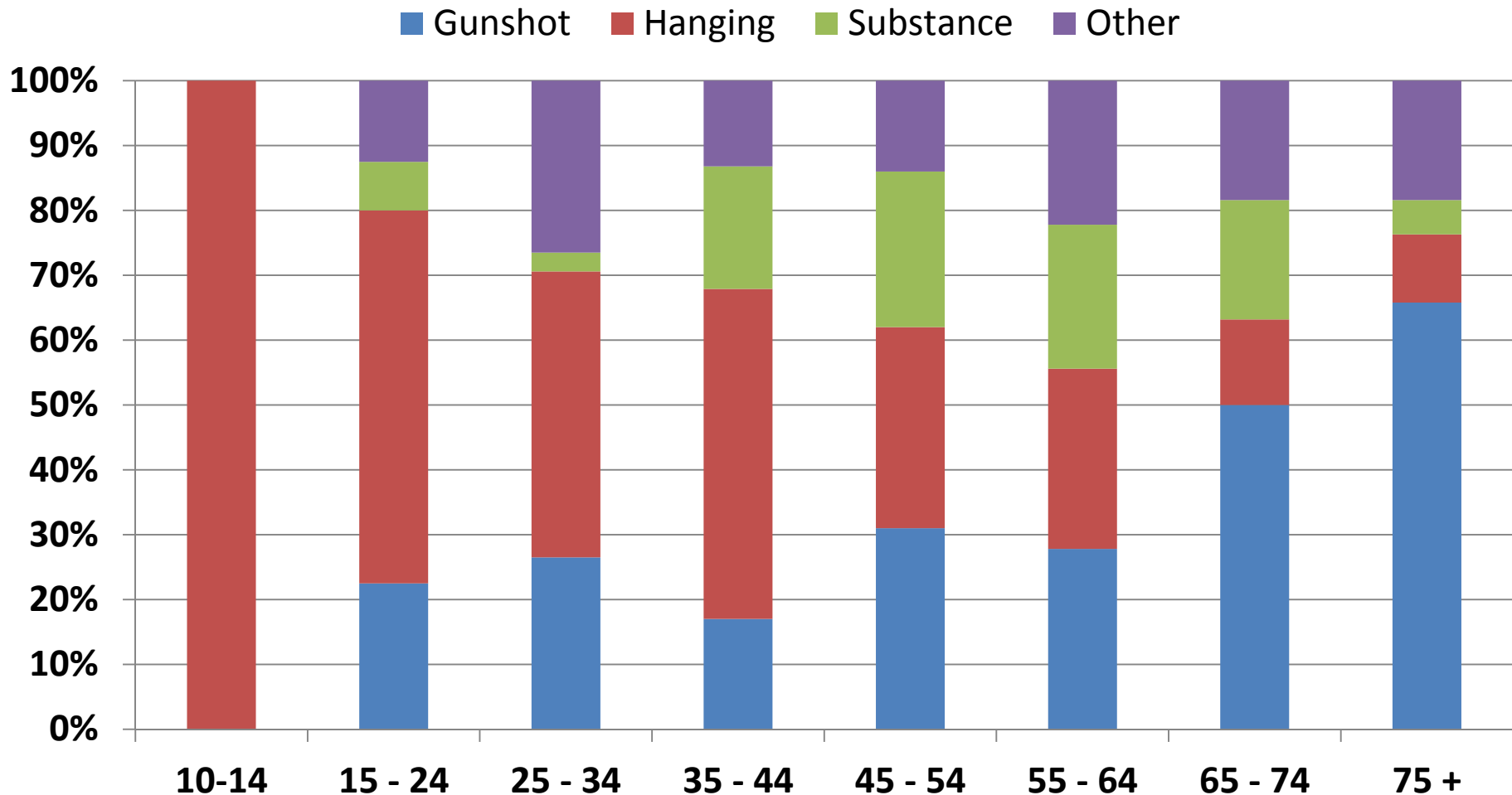
Source: OCME

Method of Suicide in CT by Gender 2014 (n=377)

Method of Suicide	Female %	Male%
Gunshot	13.0	39.7
Hanging/Strangulation	27.0	35.7
Poisoning Liquid/Solid	38.0	9.0
Poisoning Gas	6.0	4.7
Jump	0	2.9
Suffocation	6.0	2.5
Cut/Incision	2.0	2.2
Motor Vehicle/Train	4.0	1.4
Drowning	4.0	1.1
Self-Immolation	0	.4
Other	0	.4

Source: OCME

Primary Methods of Suicide in CT by Age Range 2014



Location of Suicide Injury in CT 2012

Location	Frequency	Percent
Residence	281	77.2
Recreation/Secluded Area	29	8.0
Railroad	7	1.9
Roadway	7	1.9
Parking Lot/Structure	7	1.9
Hotel/Motel	6	1.6
Commercial Est./Public Bldg	5	1.4
School	4	1.1
Motor Vehicle	4	1.1
Correctional Facility	4	1.1
Cemetary/Church	4	1.1
Hospital/Residential Facility	2	.5
Other	2	.5
Missing	2	.5
Total	364	100.0

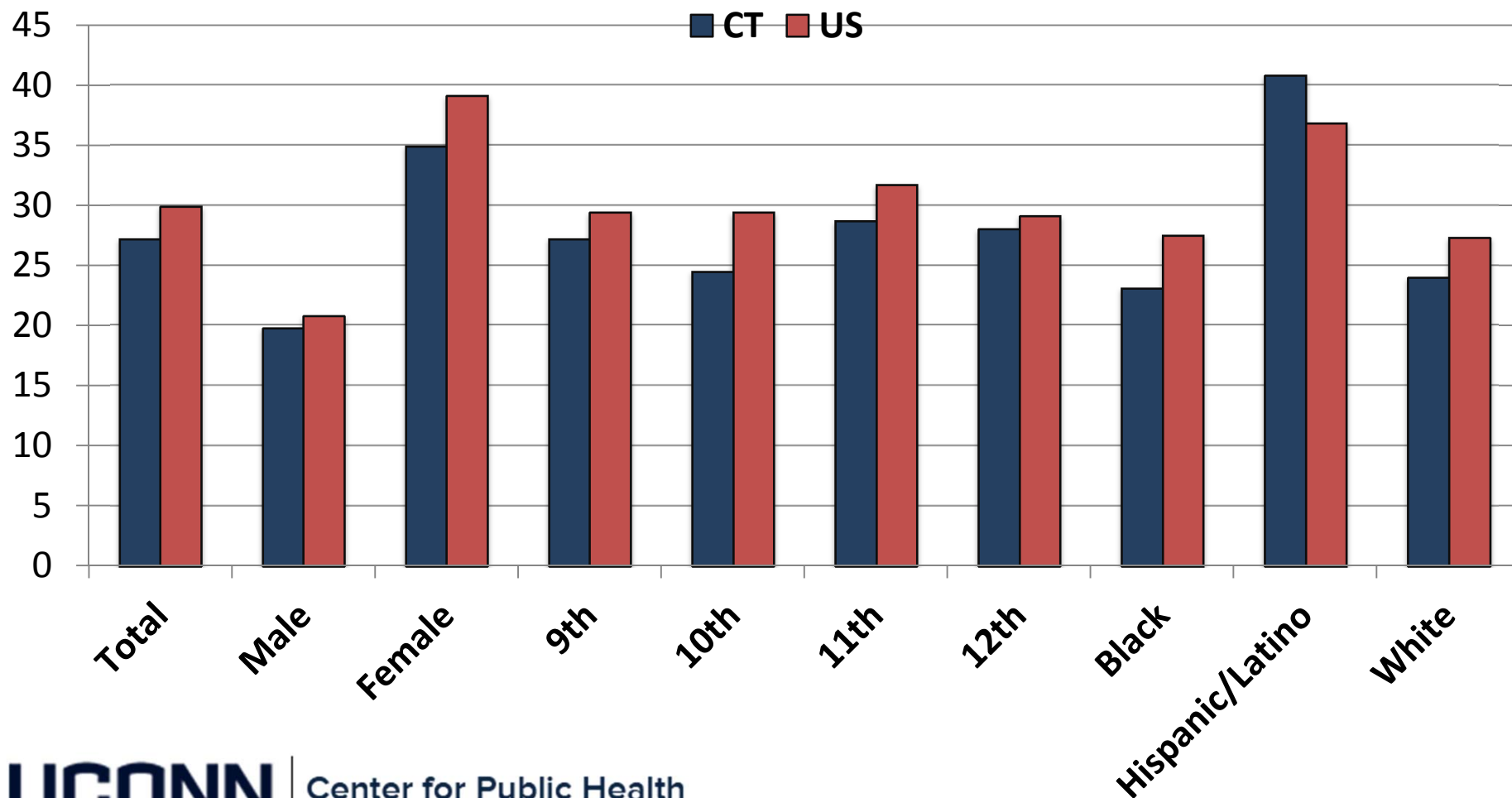
Number & Rate of Suicide by CT County 2014

County	n	Population	Rate/100,000
New London	44	274,150	16.1
Windham	17	117,604	14.5
Litchfield	24	186,924	12.8
New Haven	106	862,287	12.3
Middlesex	18	165,562	10.9
Tolland	16	151,377	10.6
Hartford	79	898,272	8.8
Fairfield	73	939,904	7.8
Total	377	3,596,080	10.5

Rate: Per 100,000
Source: OCME, DPH

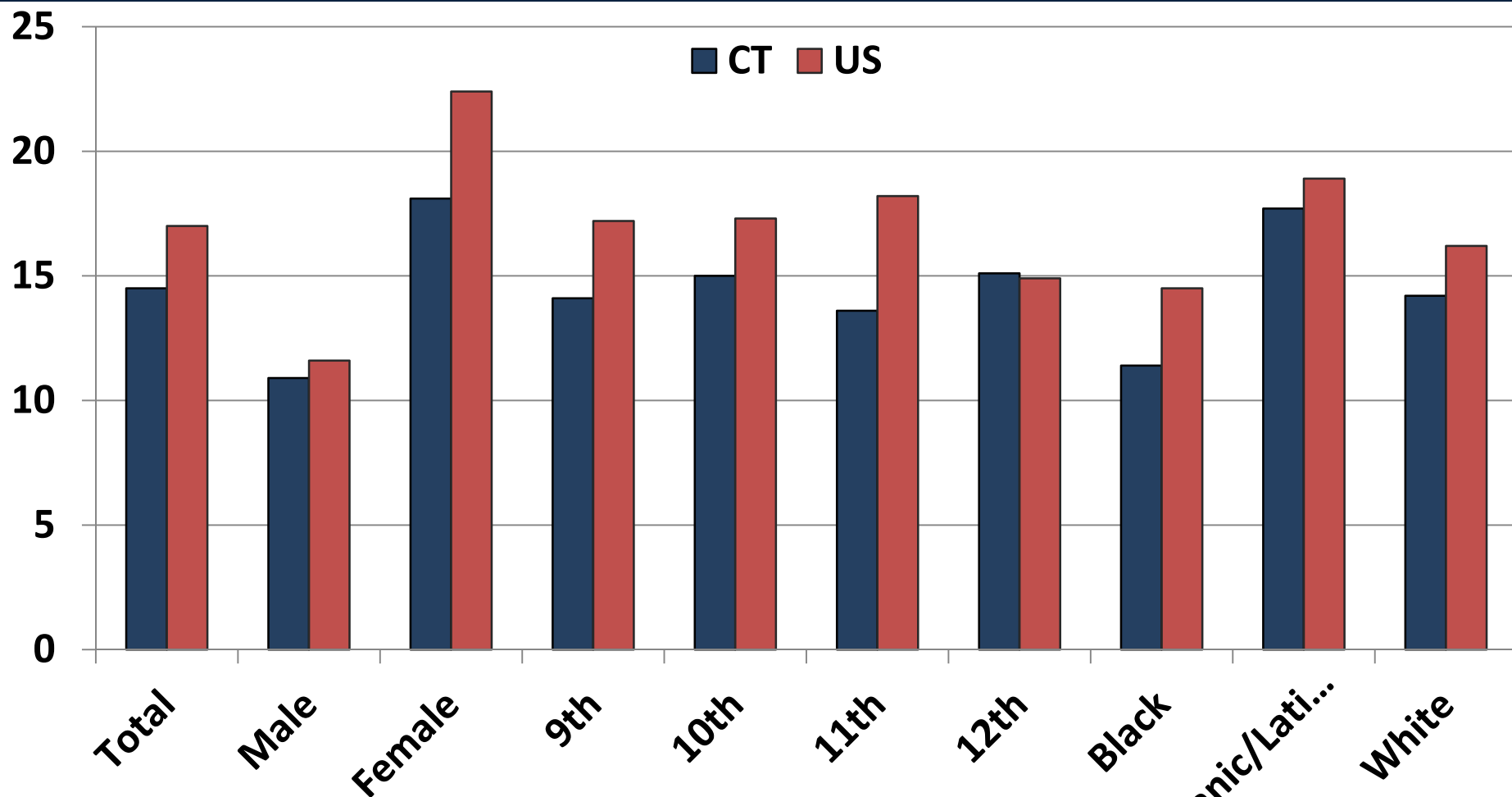
2013 Youth Risk Behavior Survey Results

Percent of students who felt sad or hopeless almost every day for two plus weeks in a row, past 12 months



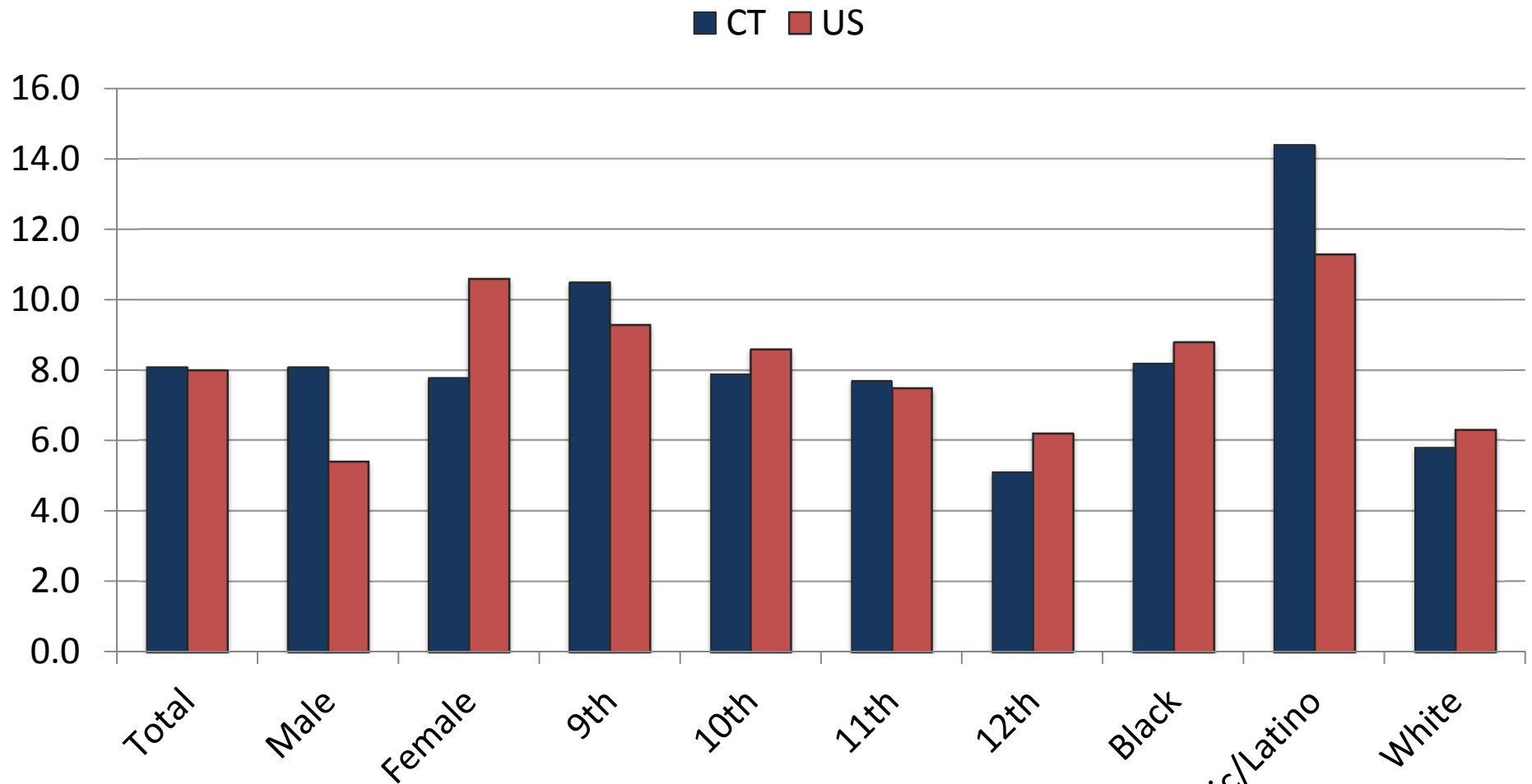
2013 Youth Risk Behavior Survey Results

Percent of students who seriously considered attempting suicide during the past 12 months



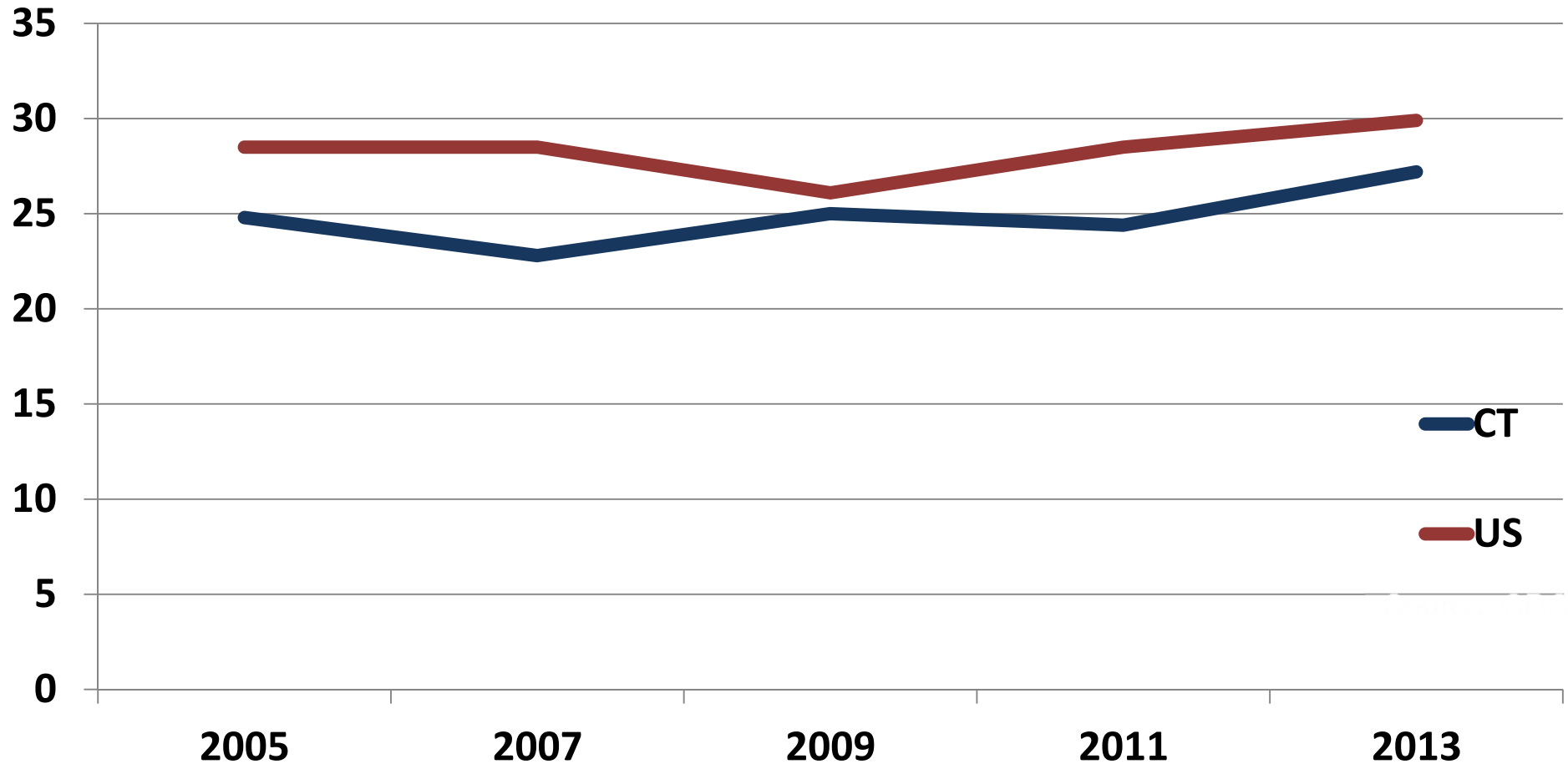
2013 Youth Risk Behavior Survey Results

Percent of students who attempted suicide one or more times during the past 12 months



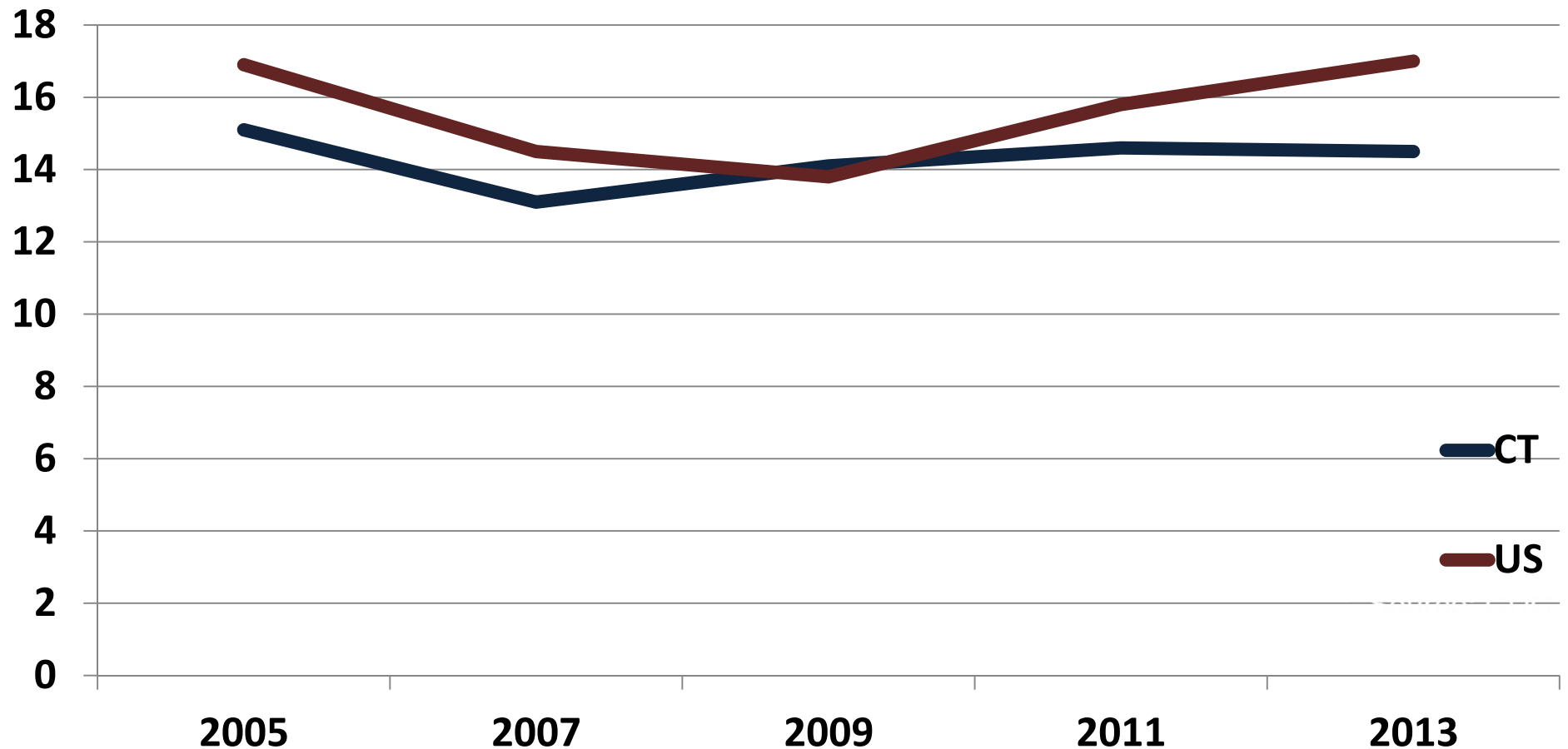
Youth Risk Behavior Survey Results: CT & US

Percent of students who felt sad or hopeless for 2 or more weeks during the past 12 months (2005 – 2013)



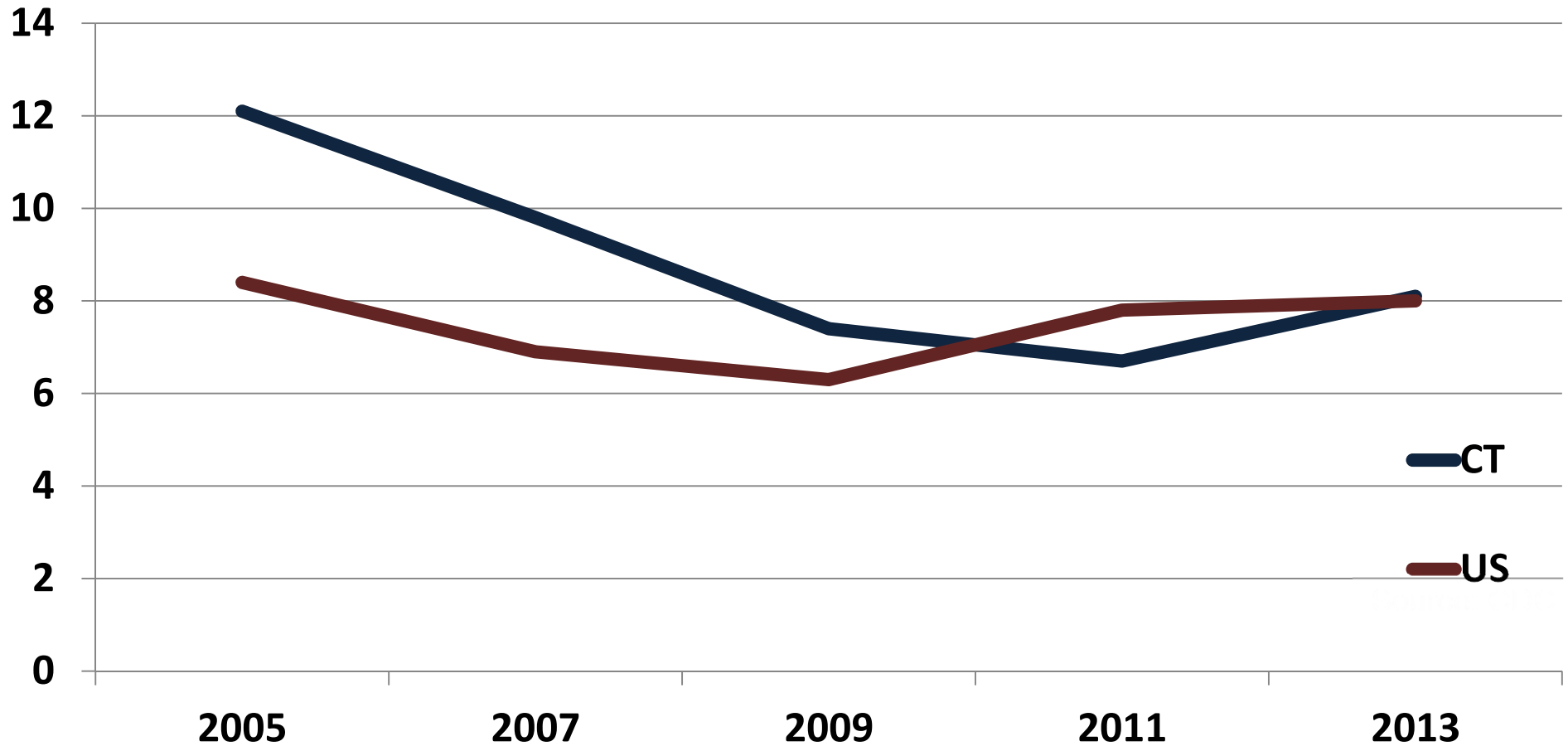
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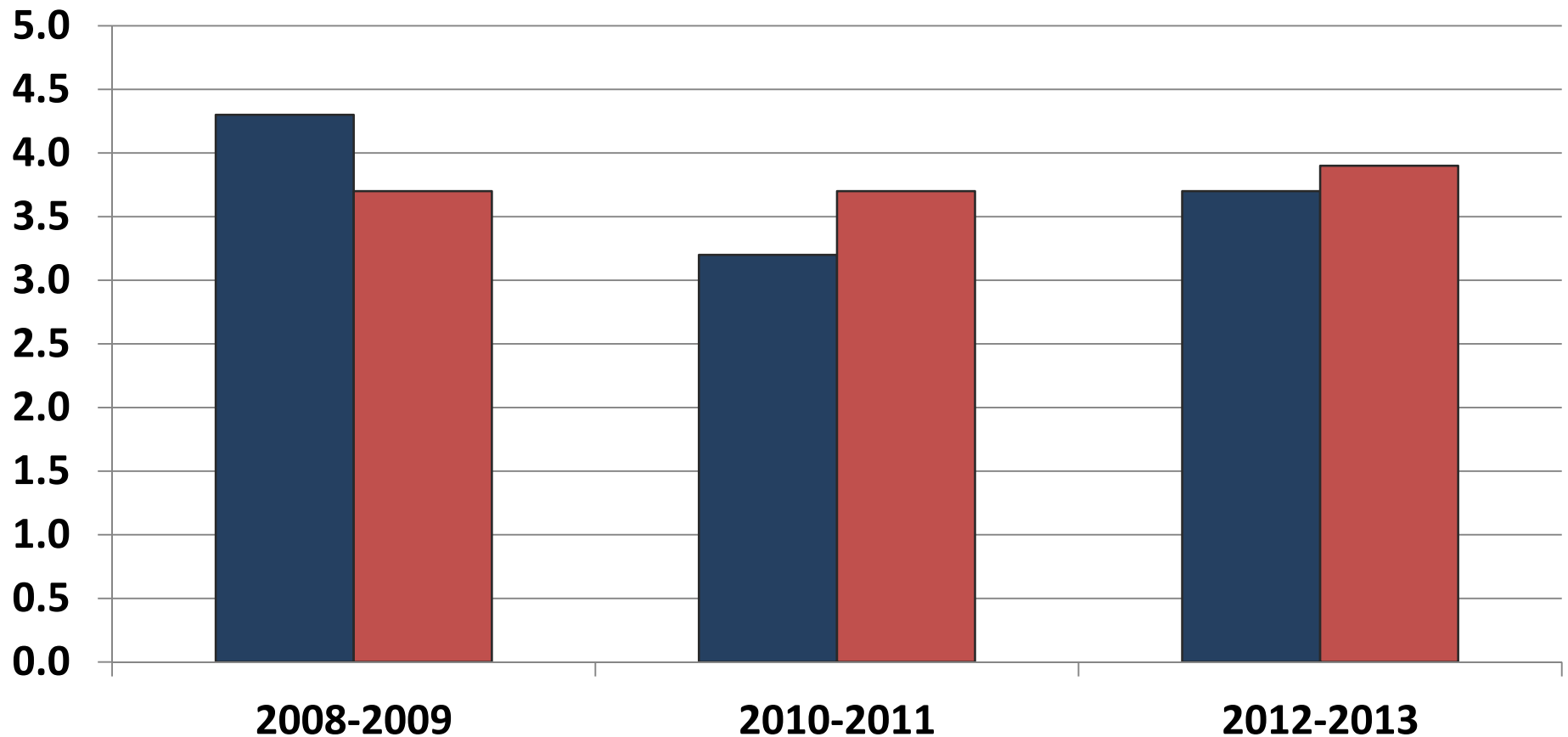
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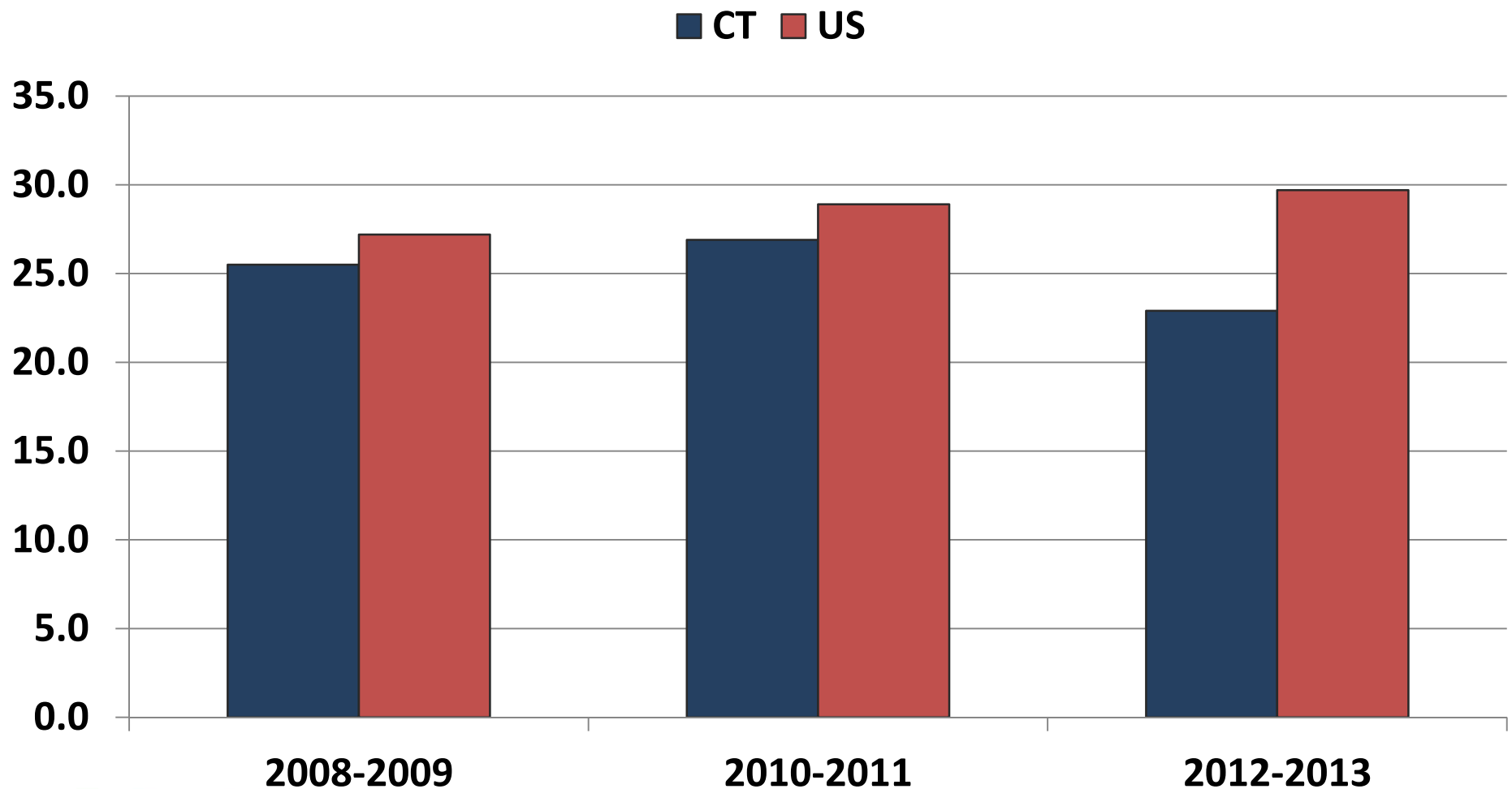


Seriously Think About Killing Self During past 12 months (Adult)

■ CT ■ US

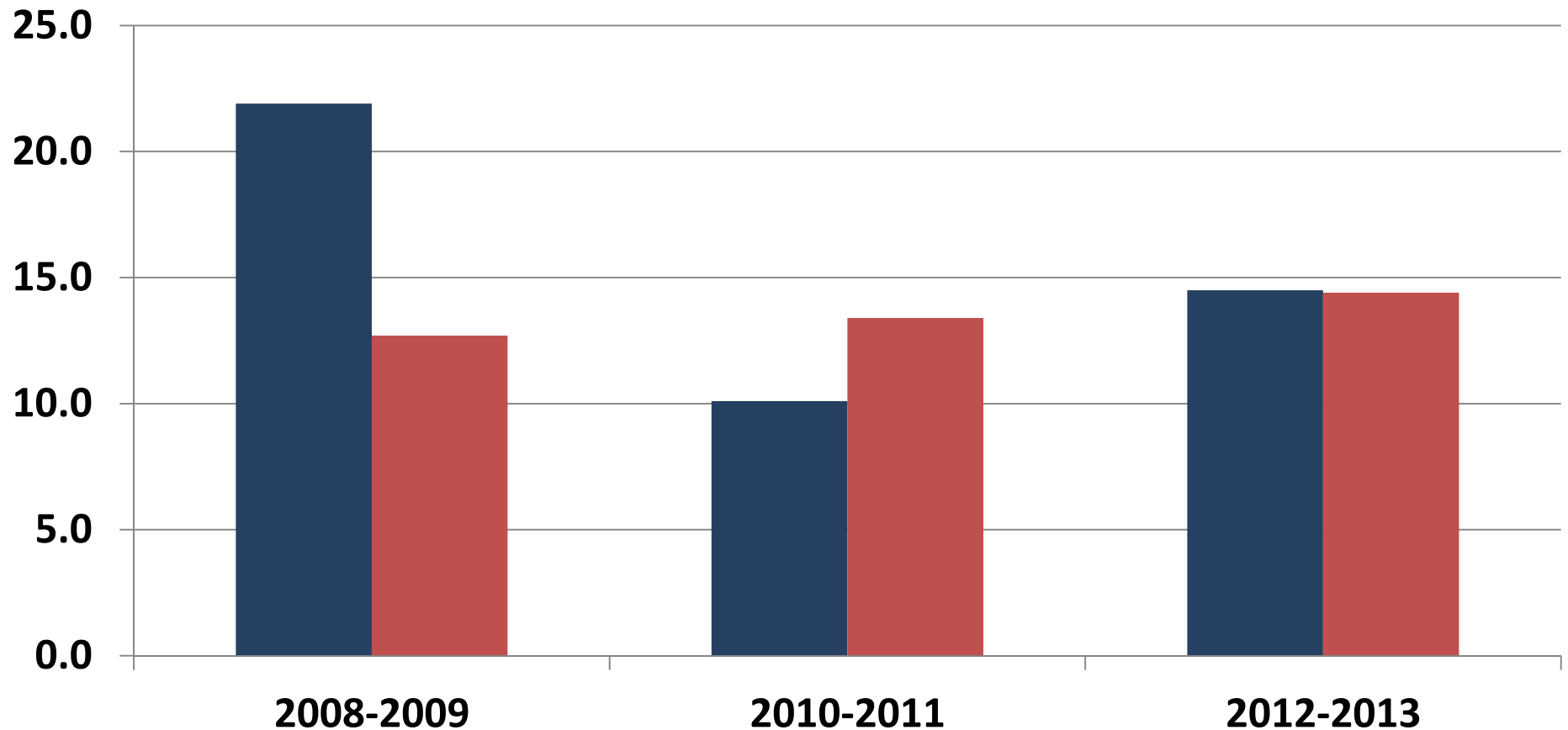


Make Plans to Kill Self During past 12 months (Adult)



Try to Kill Self During past 12 months (Adult)

■ CT ■ US



Why is Targeting Important?

- Resources for suicide prevention scarce
 - NIH spending in FY 2014 = \$22 million
 - 195th out of 244 disease areas in funding¹
 - SAMHSA spending in FY 2015 = \$60 million
 - = 1.7% of the agency's budget.^{2,3}
- Risk of spending scarce resources in wrong places

Available Data to Assess Suicide Risk

- Mortality Statistics
- Survey Data (NSDUH, YRBS)
- Claims Data

Strengths and Weaknesses of Data Sources for Targeting Risk

Data Source	Statistical Power	Geographic/ Demographic Granularity	Ease of Use
Mortality	-	+	-

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Data Source	Statistical Power	Geographic/ Demographic Granularity	Ease of Use
Mortality	-	+	-
Survey	+	-	+

Strengths and Weaknesses of Data Sources for Targeting Risk

Data Source	Statistical Power	Geographic/ Demographic Granularity	Ease of Use
Mortality	-	+	-
Survey	+	-	+
Claims	+	+	-

An example of state level data on hospitalization for self-injury

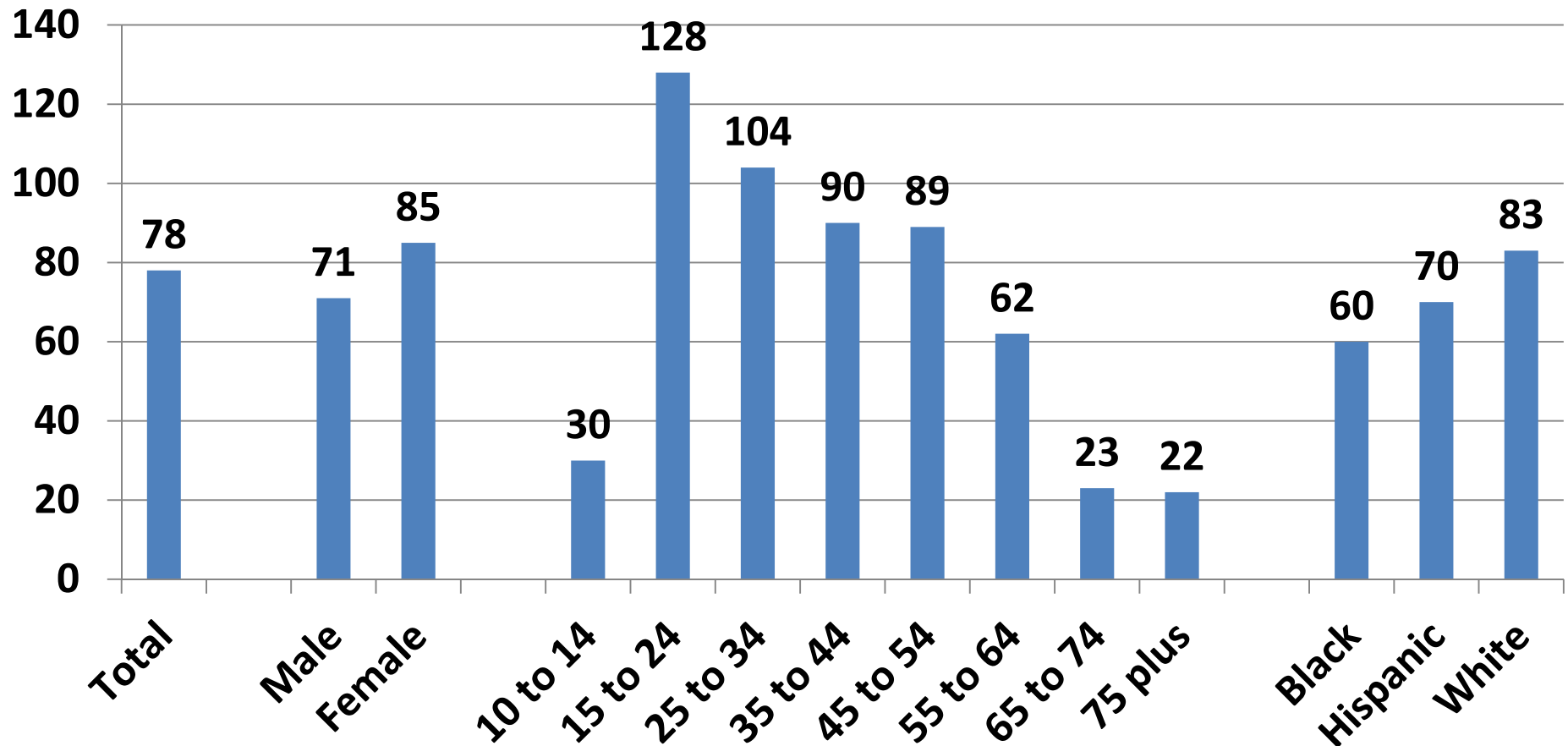
**CT Hospital Inpatient Discharge Database
(Department of Public Health)**

How is self injury captured?

ICD9 “E Codes”

ICD9 Code	Description
E950	Suicide and self-inflicted poisoning by solid or liquid substances
E951-952	Suicide and self-inflicted poisoning by gases
E953	Suicide and self-inflicted injury by hanging , strangulation , and suffocation
E954	Suicide and self-inflicted injury by submersion (drowning)
E955	Suicide and self-inflicted injury by firearms , air guns and explosives
E956	Suicide and self-inflicted injury by cutting and piercing instrument
E957	Suicide and self-inflicted injury by jumping from high places
E958	Suicide and self-inflicted injury by other and unspecified means
E959	Late effects of self-inflicted injury

Rates of Hospitalization for Self-Inflicted Injuries (Per 100,000), 2012



Source: CT HIDD (DPH)

How Serious are Self-Inflicted Injuries Requiring Hospitalization?

Outcomes of self-injury

Total number in 2012 = 2,453

% Discharged to Psych Facility	% Expired	Length of Stay (Days)
31%	1.1%	4.8

Source: CT HIDD (DPH)

Comparing Length of Stay: Self-Injury vs. 5 Most Common DRGs (2012)

DRG/ICD9	Length of Stay (Days)
ICD9 E950-959	4.8
Heart Failure & Shock w/ MCC	6.5
Esophagitis& Gastroenteritis	4.0
Chest Pain	2.6
Joint Replacement	4.3
Simple Pneumonia/Pleurisy w/MCC	6.5

Source: CT HIDD (DPH)

Hospitalization for Self-Inflicted Injuries: Method of Injury (2012)

Method	n	%
Poisoning (Solid, Liquid)	1807	73.7
Poisoning (Gas)	25	1.0
Incision/Cut	413	16.8
Hanging/Strangulation	50	2.0
Jumping	21	0.9
Firearms	16	0.7
Drowning	3	0.1
Late Effects	16	0.7
Other	102	4.2
Total	2453	100.0

Source: CT HIDD (DPH)

Taking Stock

Hospital claims for suicidal behavior:

- Capture serious attempts
- Numerous (10x more frequent than deaths)
- Detailed (esp. geography)
- Available (47 states report into HCUP)



Questions?

References

1. National Institutes of Health. Available at:
http://report.nih.gov/categorical_spending.aspx. Accessed March 2015.
2. Substance Abuse and Mental Health Services. Available at:
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3. US Department of Health and Human Services. Budget in Brief. Available at:
<http://www.hhs.gov/budget/fy2016-hhs-budget-in-brief/hhs-fy2016budget-in-brief-samhsa.html#SAMHSA%20Programs%20and%20Services>. Accessed March 2015.