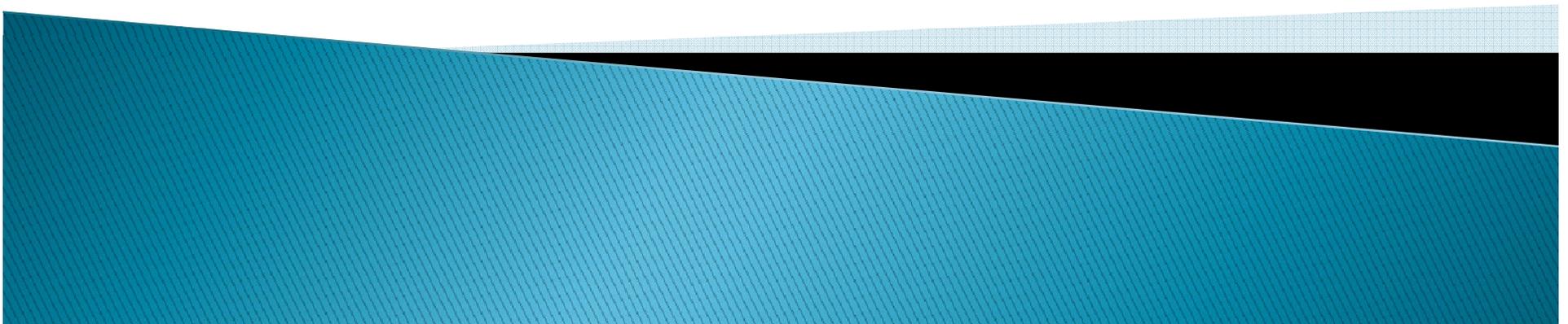


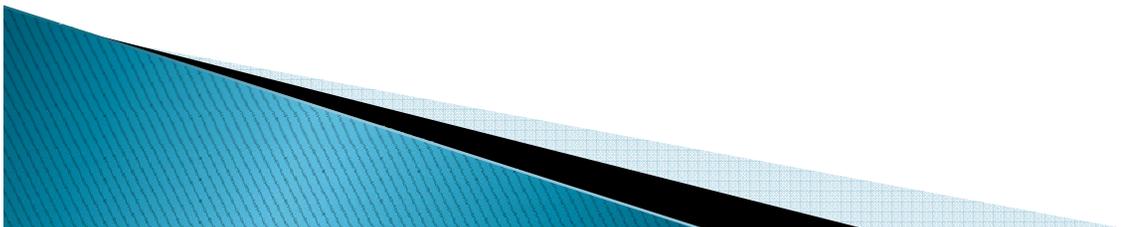
Youth Suicide in Maine

Erika Lichter, ScD
University of Southern Maine / Maine CDC

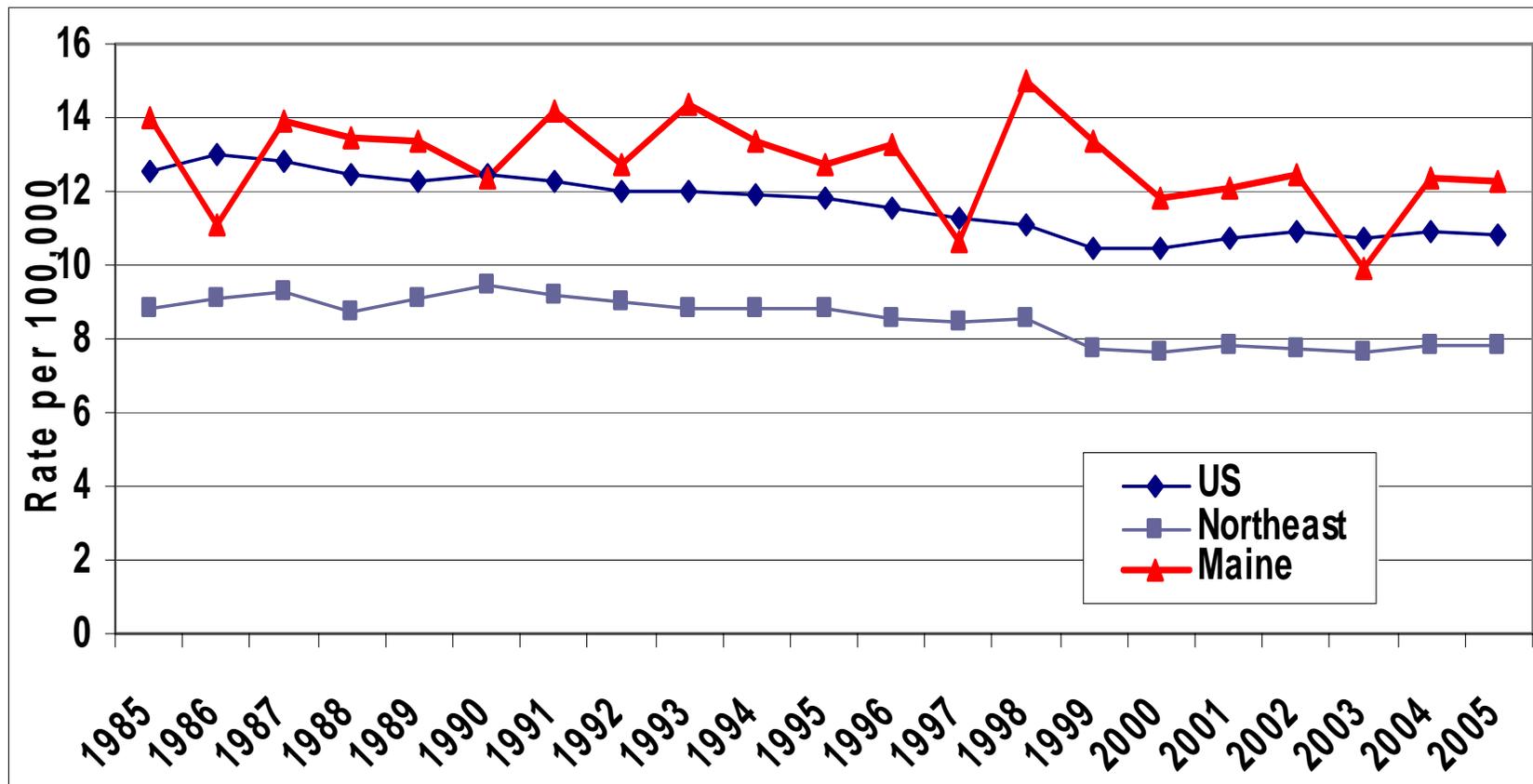


Suicides in Maine

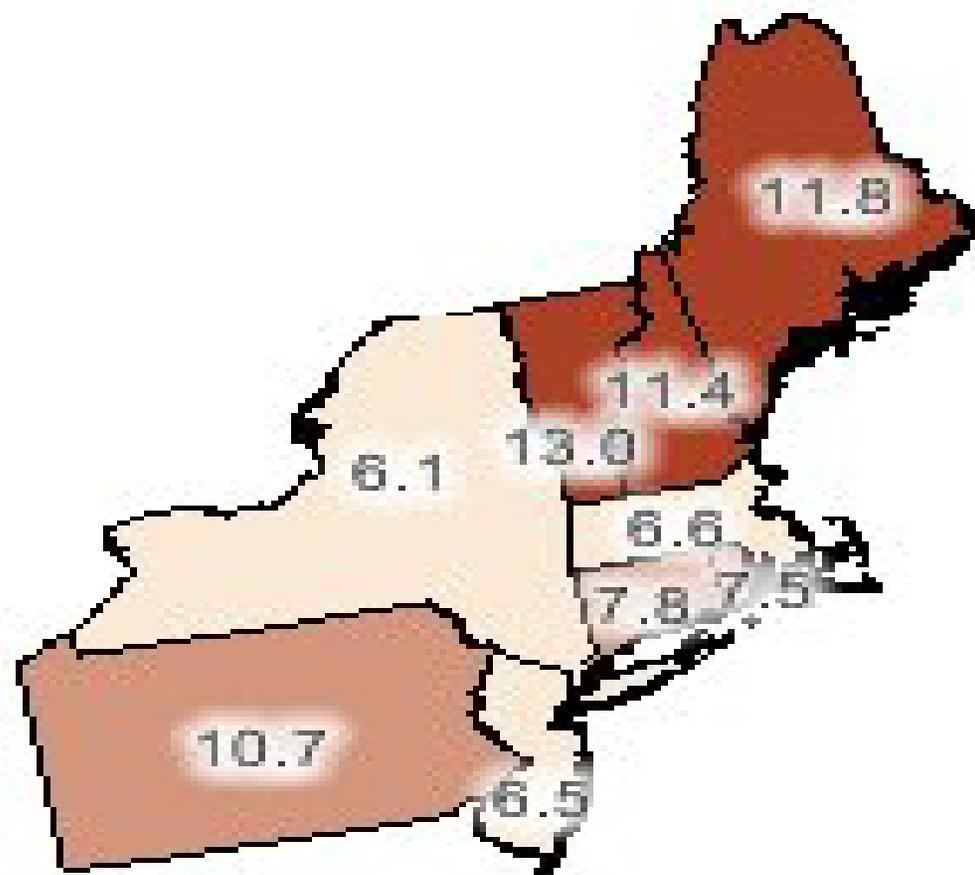
- ▶ On average, 1 600 people in Maine die by suicide each year
 - 1 560 suicides in 2006
- ▶ Men in Maine are 4X more likely than women to die by suicide (19.4 vs. 4.4 per 100,000)



Suicide Rates (per 100,000) for Maine, Northeast, and the U.S., 1985–2005, All Ages, Age-Adjusted



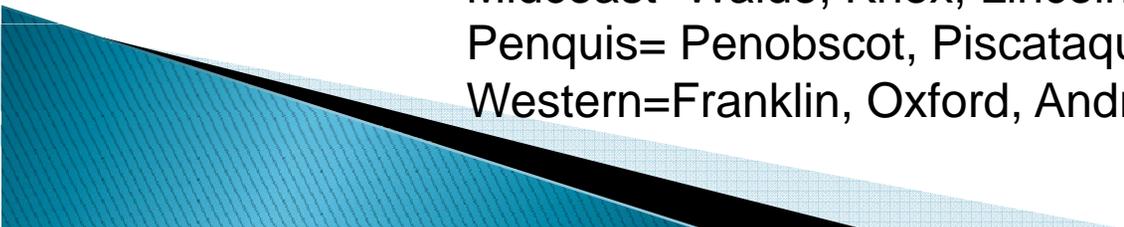
Age-adjusted suicide rates (per 100,000) for Maine and Northeast Region, 2001-2005



Suicide rates (per 100,000) for Maine Public Health Districts, 2002–2006

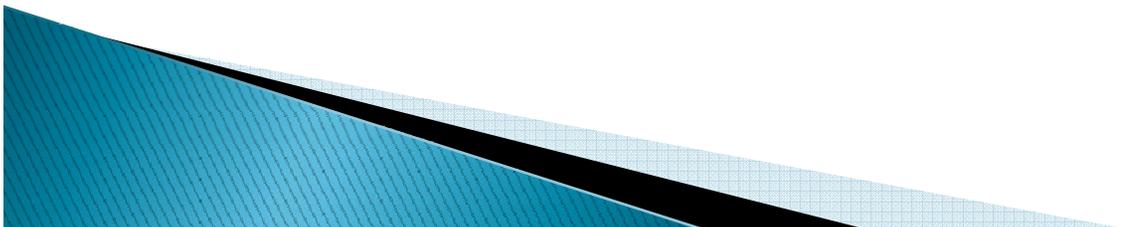
District	Number of Suicides	Crude Rate	Age-Adjusted Rate 95% Confidence Interval
Aroostook District	39	11.8	11.0 (7.8, 15.1)
Central Maine District	114	14.9	14.5 (11.8, 17.1)
Cumberland District	145	12.0	11.8 (9.9, 13.7)
Downeast District	60	15.4	14.6 (11.2, 18.8)
Mid Coast District	114	16.9	16.7 (13.6, 19.7)
Penquis District	113	15.3	15.1 (12.3, 17.9)
Western Maine District	92	10.7	10.5 (8.4, 12.8)
York	125	14.1	13.9 (11.5, 16.4)
Maine	802	13.7	13.4 (12.5, 14.3)

Central = Somerset and Kennebec
 Downeast=Washington, Hancock
 Midcoast=Waldo, Knox, Lincoln, Sagadahoc
 Penquis= Penobscot, Piscataquis
 Western=Franklin, Oxford, Androscoggin



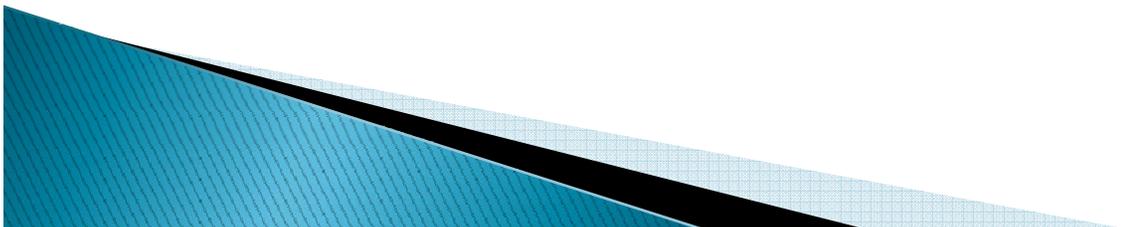
Methods of Suicide Mortality in Maine

- ▶ Overall, firearms are the most common method of suicide followed by suffocation (e.g., hanging) and self-poisoning
- ▶ Between 2002–2006, 60% of men killed themselves using a firearm, compared to 29% of women.
- ▶ 47% of women killed themselves using poison (e.g., drugs), compared to 12% of men.
- ▶ About 20% of men and women suffocated themselves.

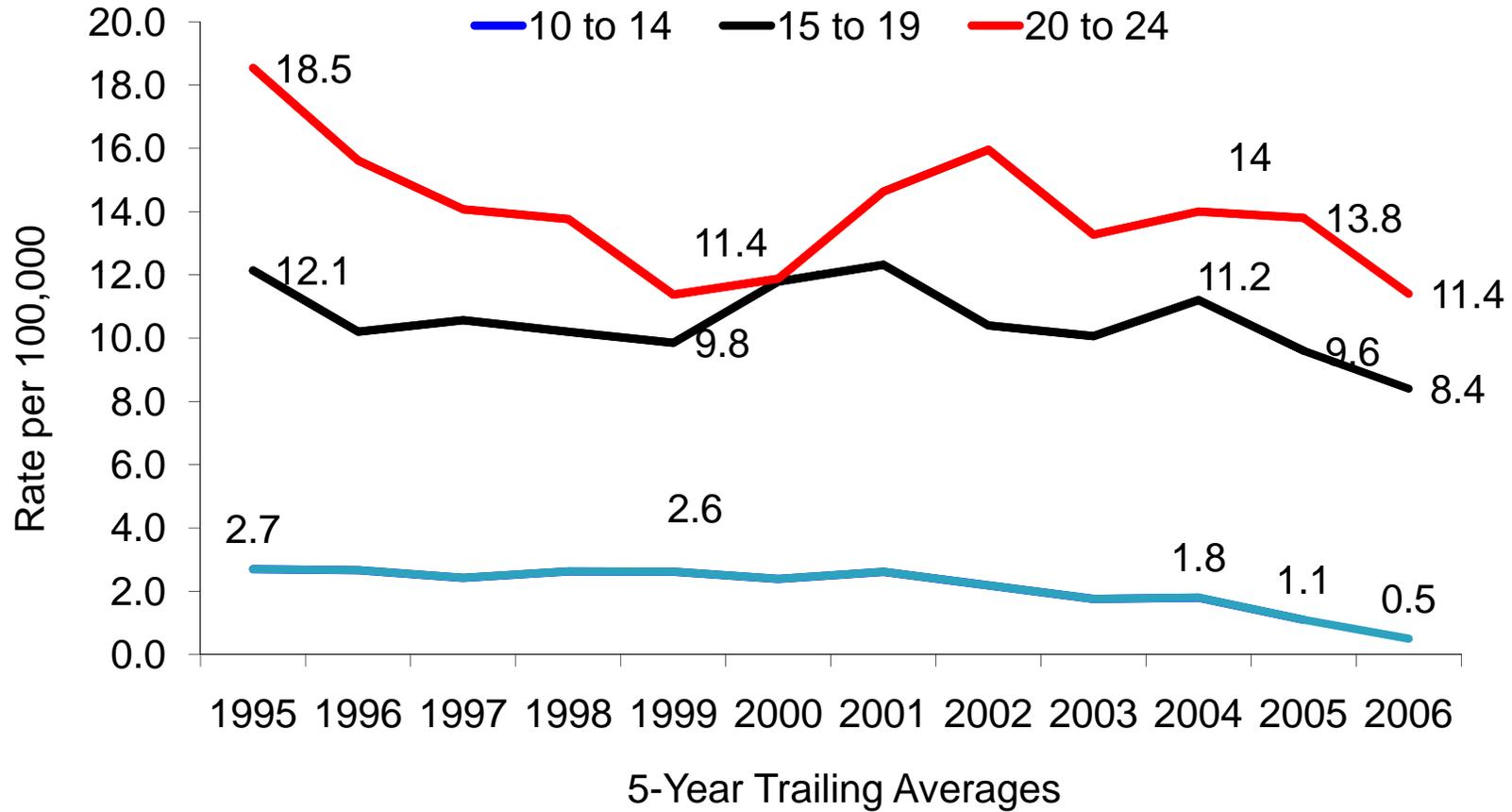


Suicide among adolescents

- ▶ In Maine, suicide is the second leading cause of death for youth age 10–24 years.
 - 89 deaths to youth age 10–24 between 2002–2006
- ▶ In 2006, there were 14 suicide deaths among youth 10–24 years.

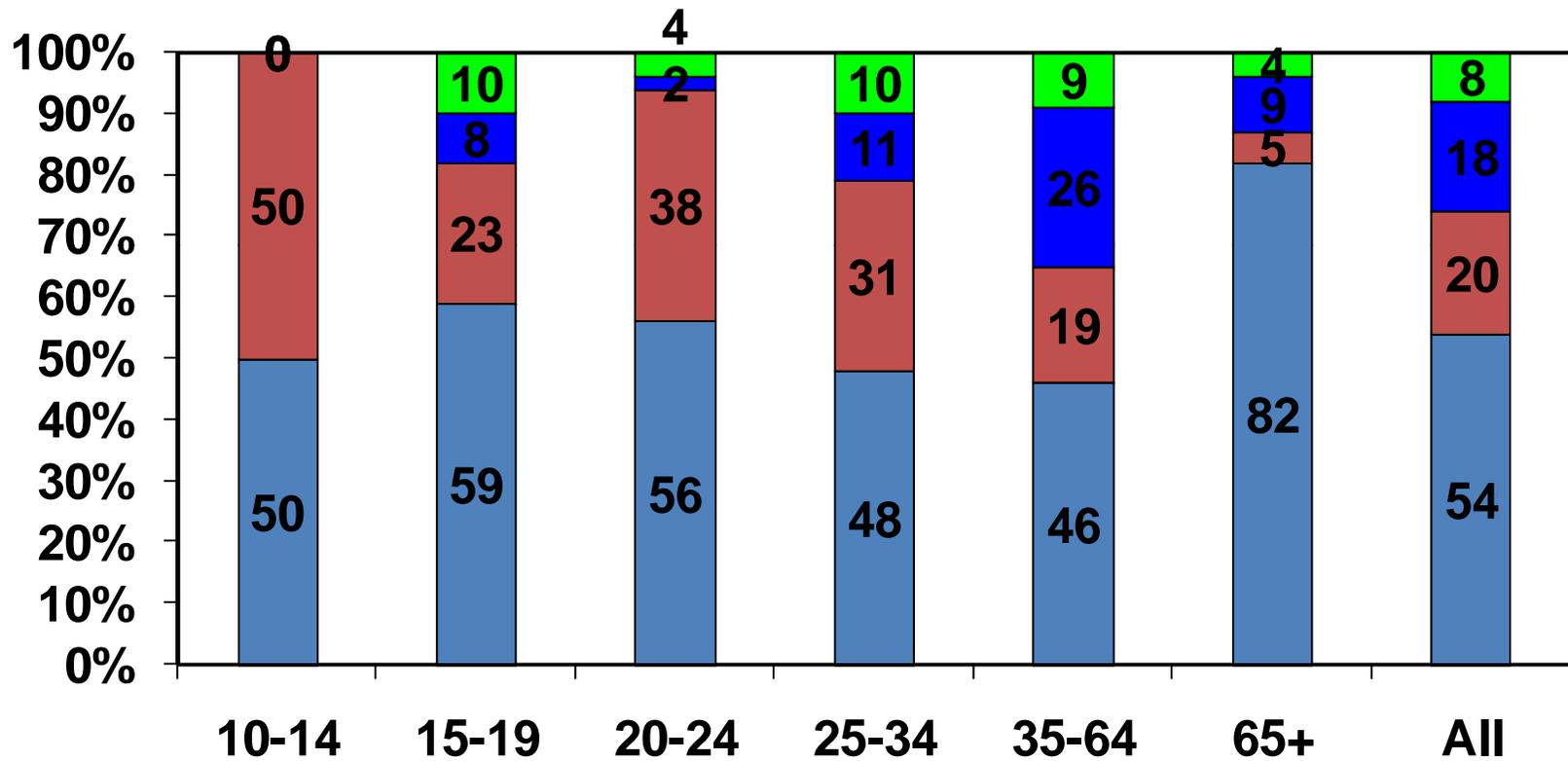


Suicide deaths among Maine youth, 1995-2006

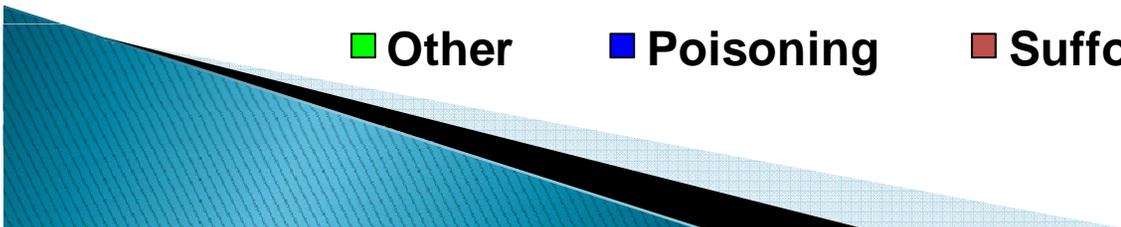


Source: National Center for Health Statistics, WISQARS

Methods of Suicide by Age, 2002-2006

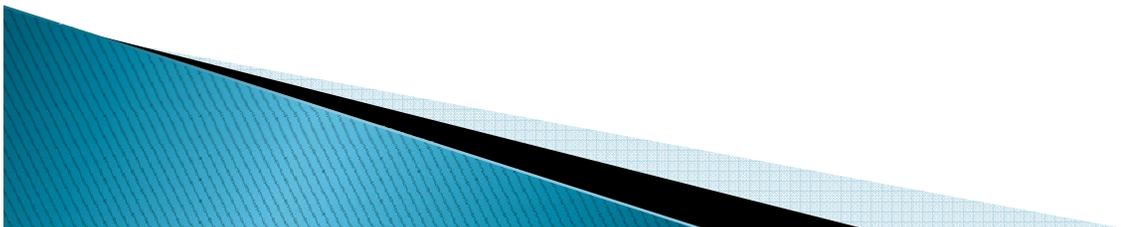


■ Other
 ■ Poisoning
 ■ Suffocation/Hanging
 ■ Firearm



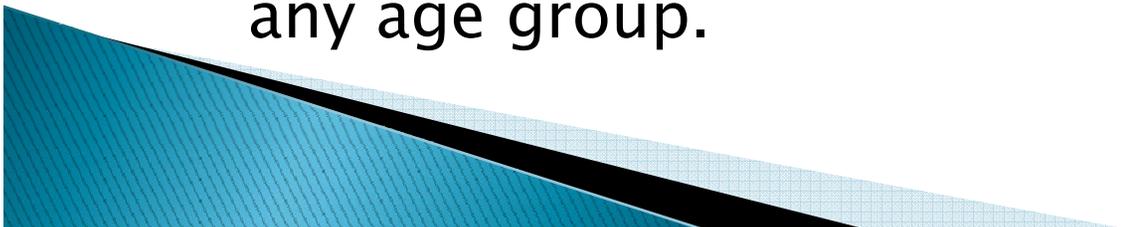
In 2006, among 10–24 year olds in Maine:

- ▶ 14 suicide deaths
- ▶ 291 hospitalizations for self-inflicted injuries
- ▶ 819 outpatient emergency department visits for self-inflicted injury

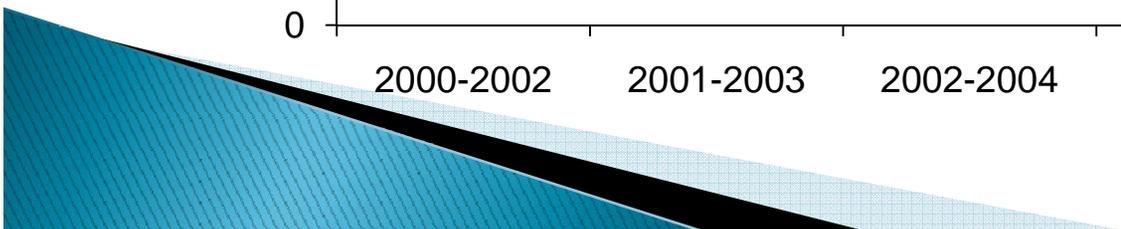
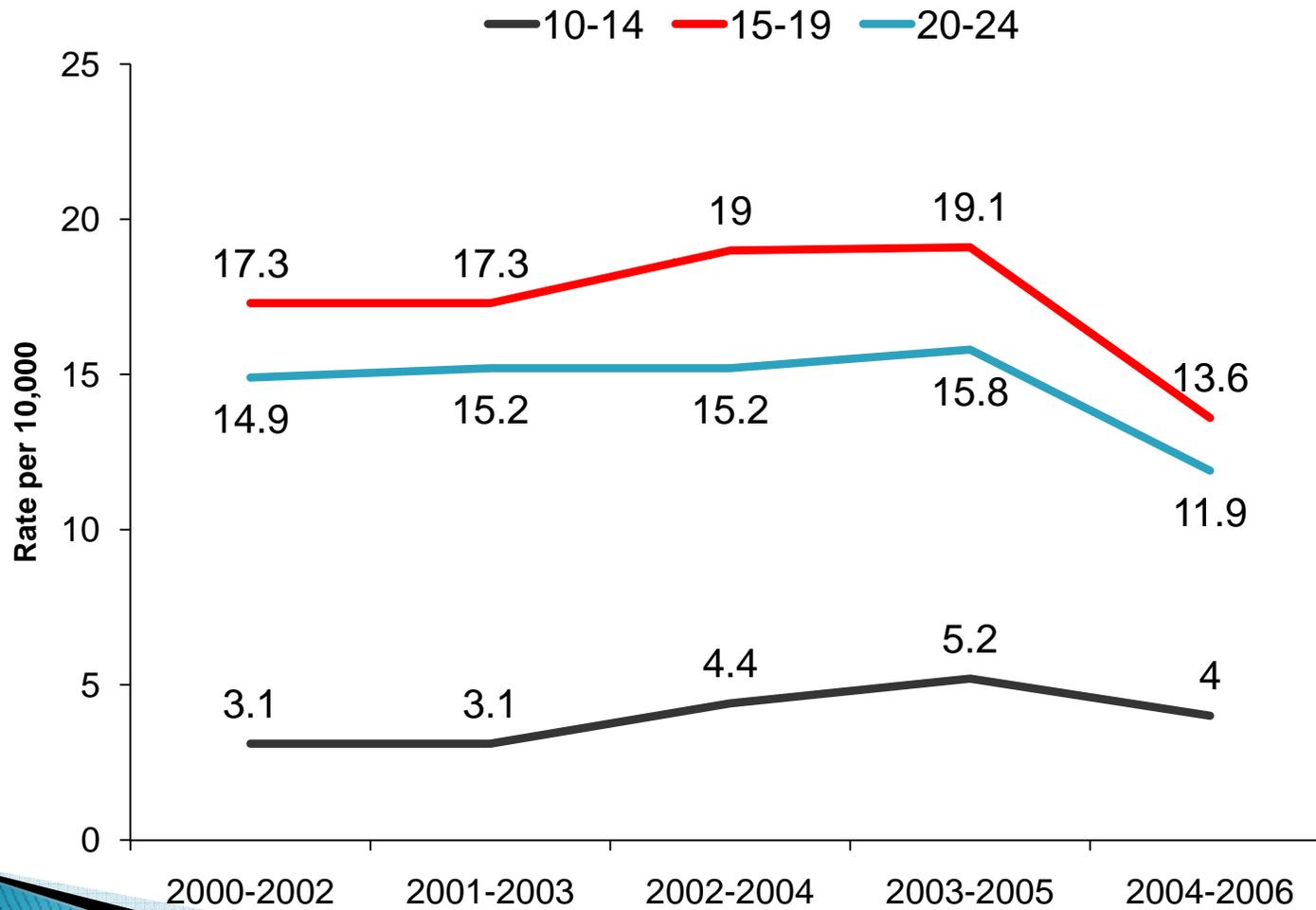


Self-inflicted Injury Among Maine Youth

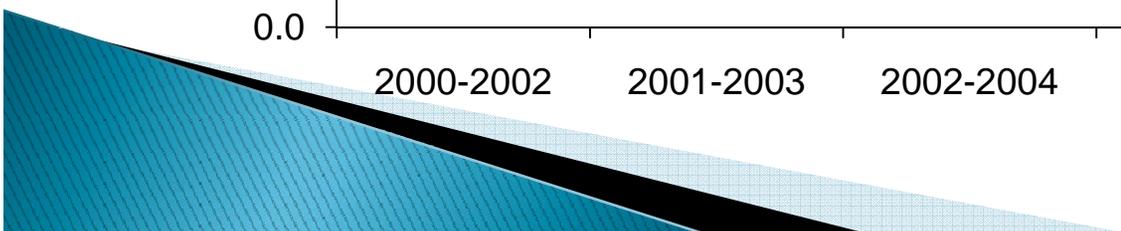
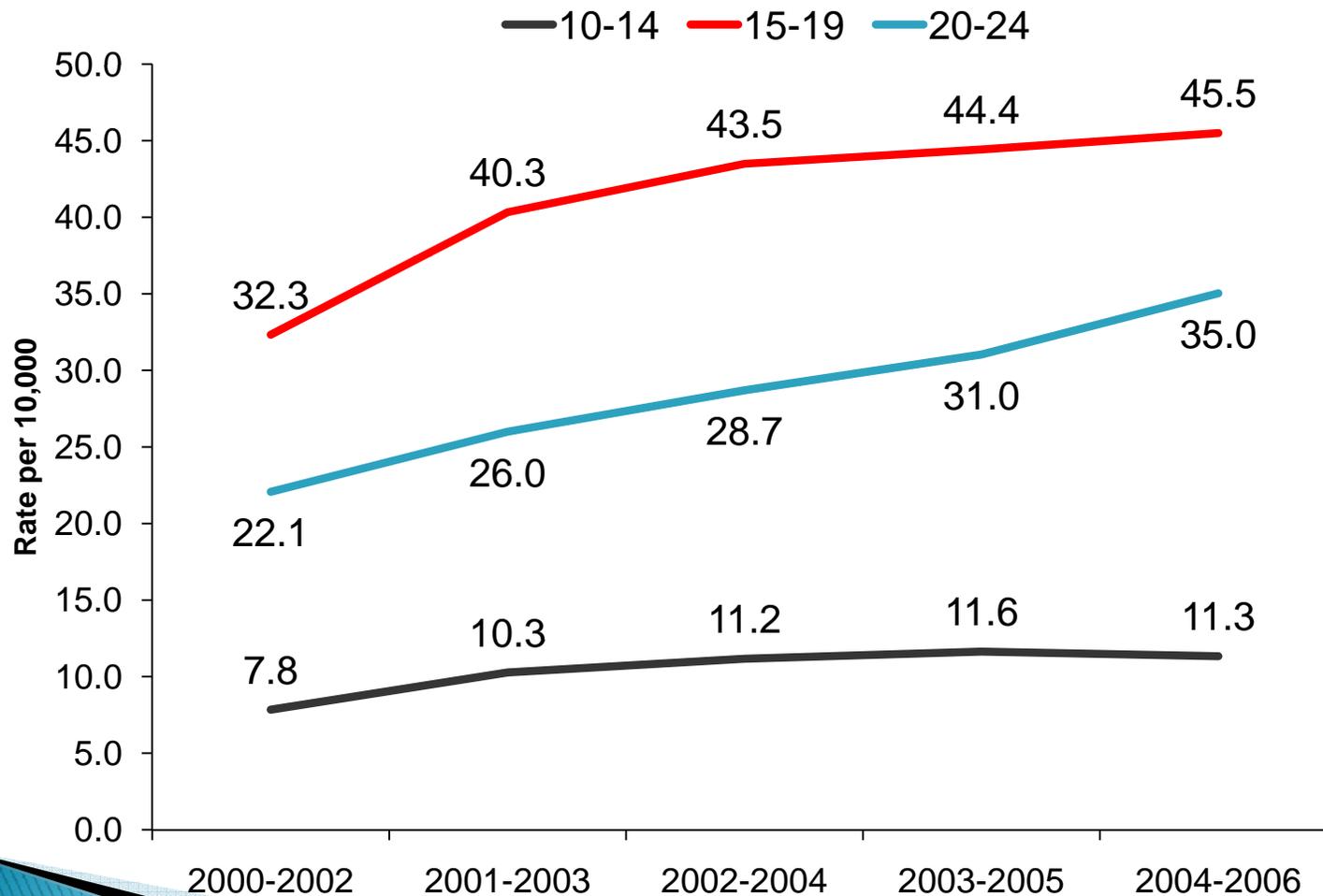
- ▶ Adolescents and young adults have the highest rates of hospitalization and emergency department visits for self-inflicted injury
 - In 2006, young adults age 20–24 had the highest rates of hospitalization of any age group.
 - Adolescents age 15–19 years had the highest outpatient ED visit rate for self-inflicted injury
 - Adolescent girls (age 15–19 yrs) have the highest self-injury hospitalization and ED visit rates of any age group.



Hospitalizations for self-inflicted injury among youth, Maine 2000-2006

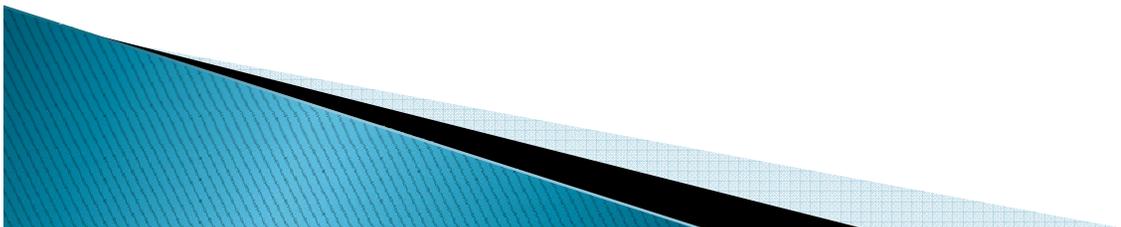


Outpatient emergency department visits for self-inflicted injury among youth, Maine 2000-2006

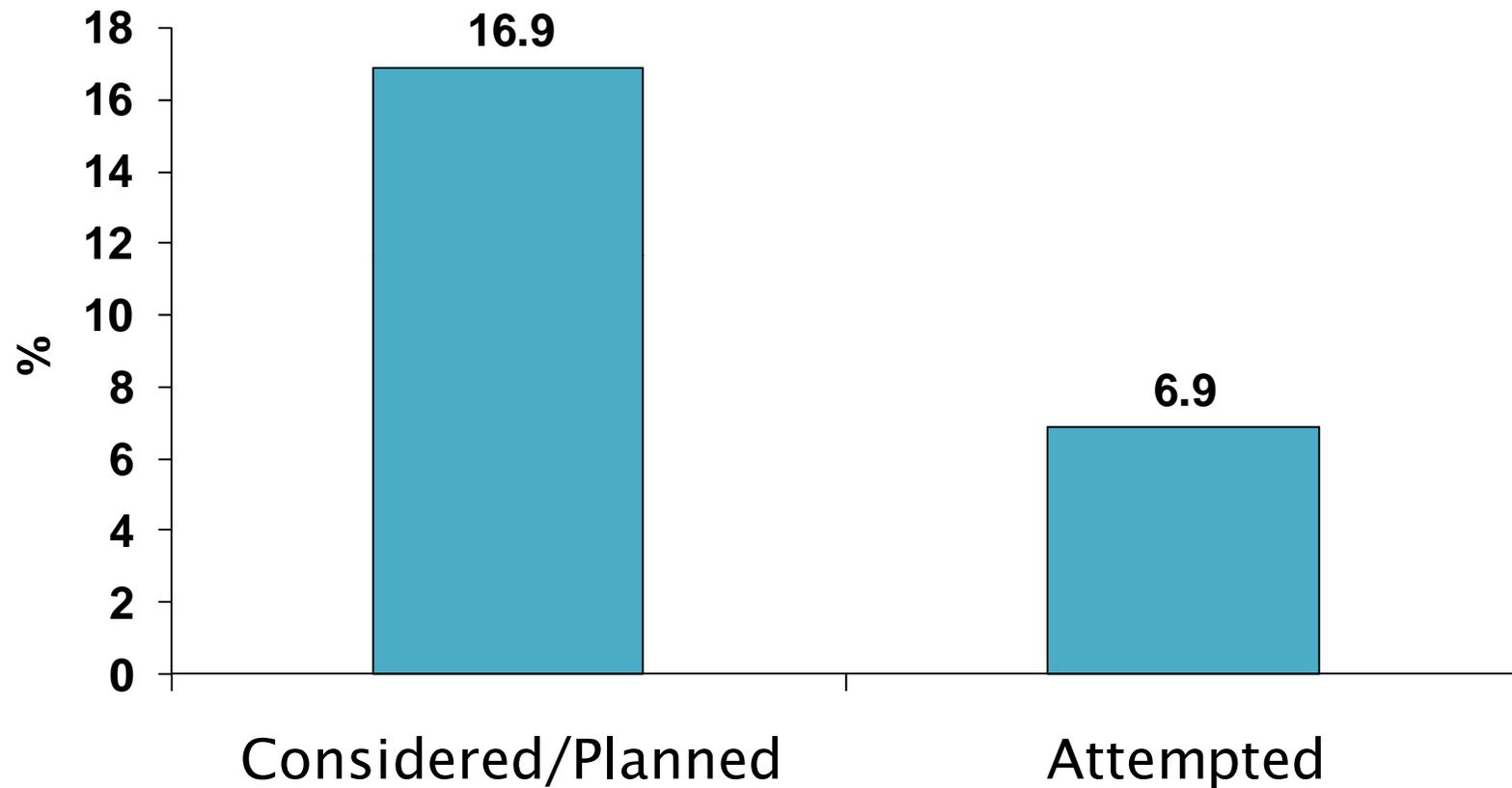


Methods of Self-inflicted Injury

- ▶ 77% of hospitalizations for self-inflicted injury in Maine between 2002–2006 were for poisoning.
 - 10% cutting
 - 10% other
- ▶ 45% of outpatient emergency department visits for self-inflicted injury were due to poisoning
 - 36% cutting
 - 17% other

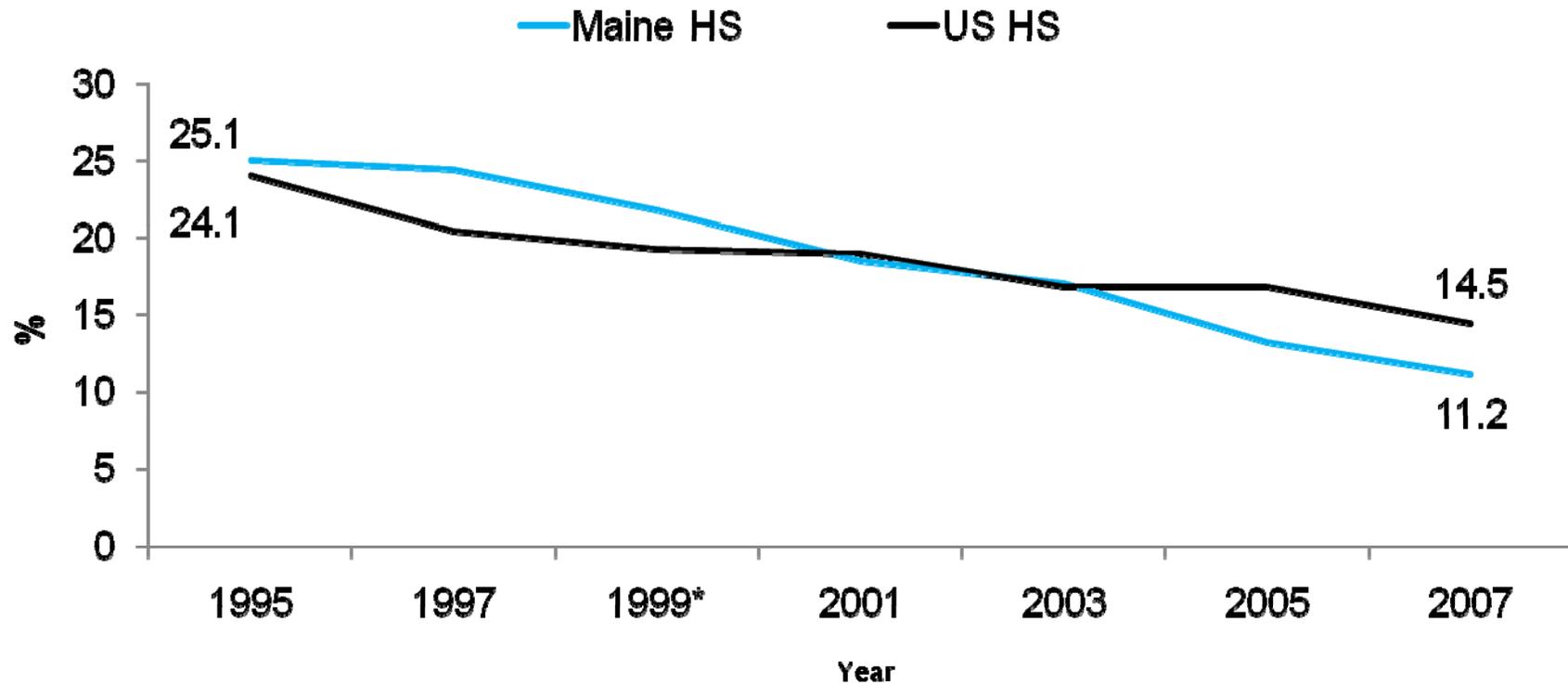


Self-reported Suicidal Behavior and Ideation among Maine High School Students, 2007



Source: Youth Risk Behavior Survey, 2007

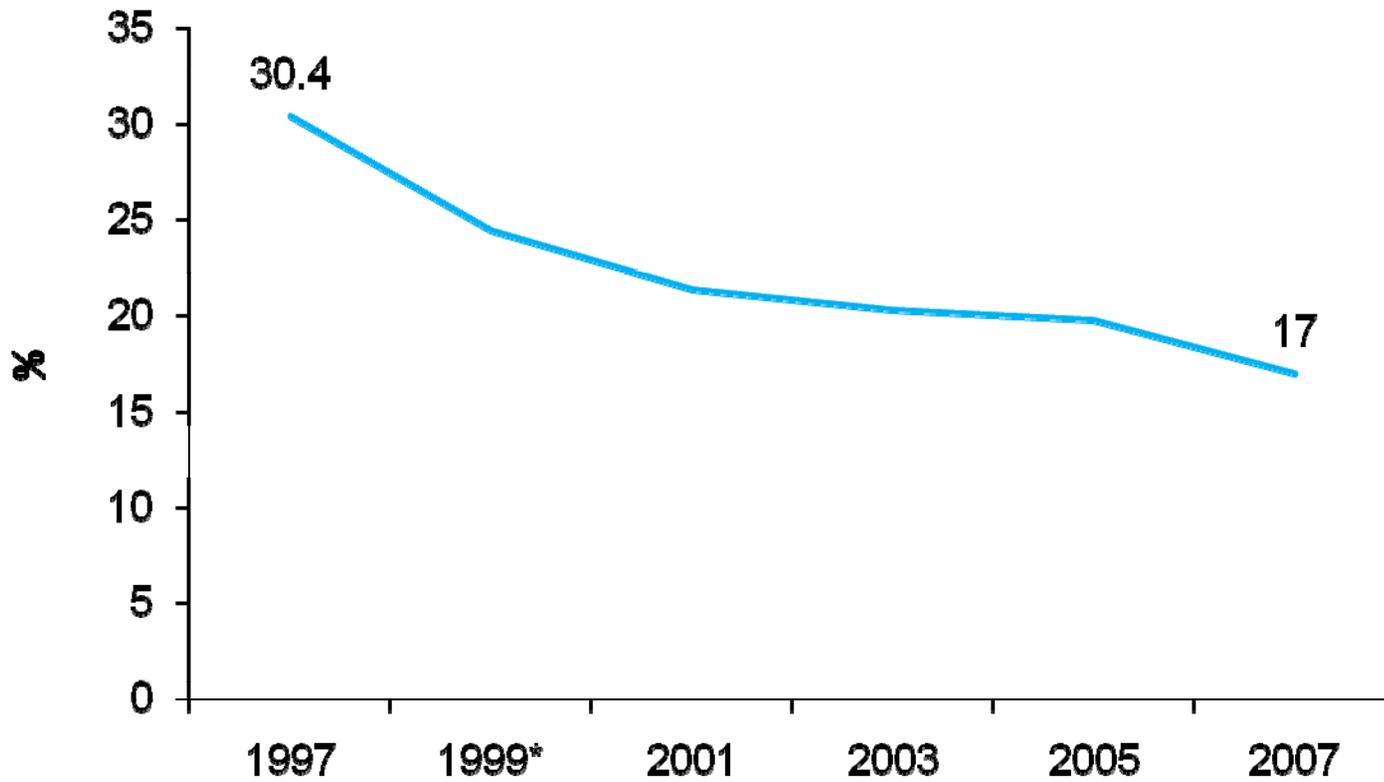
Percent of Maine & US high school students who considered suicide in past year, 1995–2007



Source: Youth Risk Behavior Survey, High School

*1999 Maine YRBS data are unweighted and may not be representative of the population

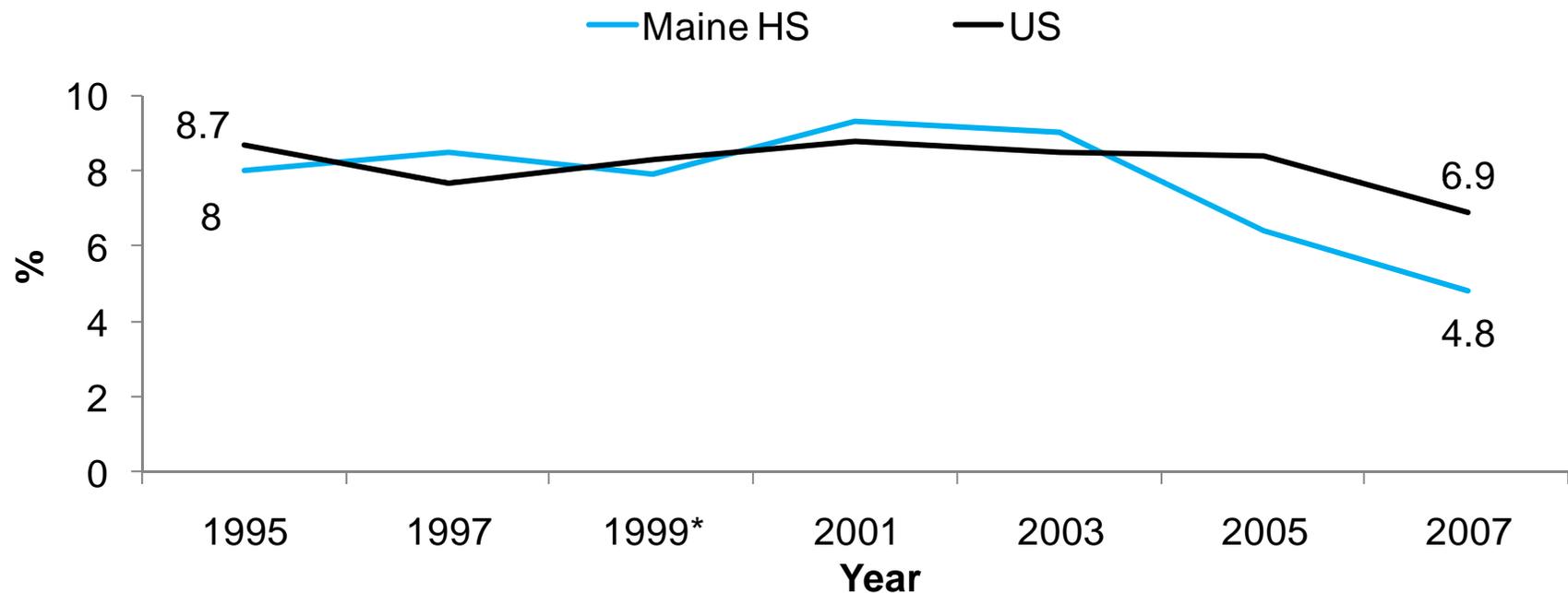
Percent of Maine middle school students who ever considered suicide, 1997–2007



Source: Youth Risk Behavior Survey, Middle School

*1999 Maine YRBS data are unweighted and may not be representative of the population

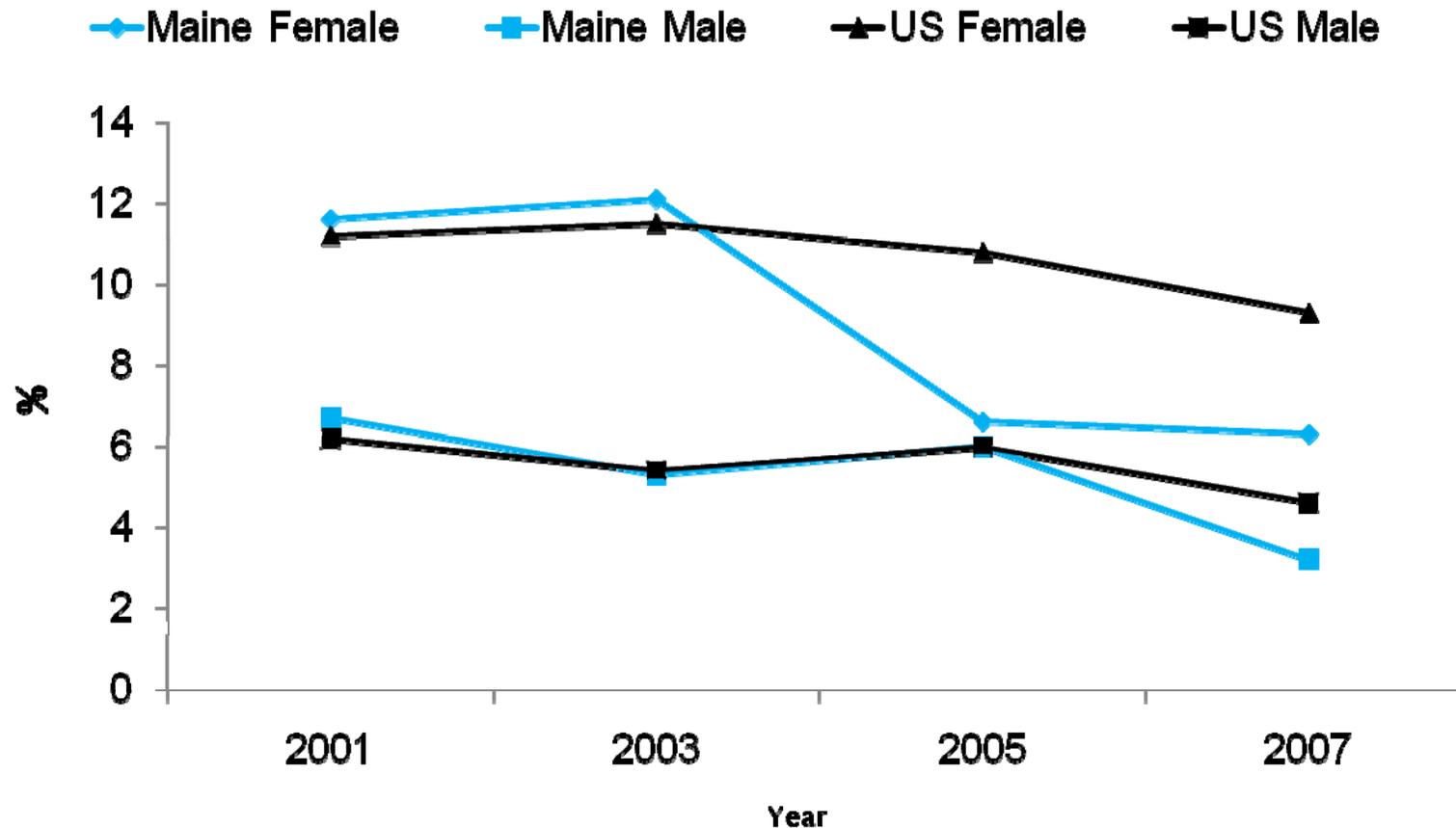
Percent of Maine & U.S. high school students who attempted suicide in past year, 1995–2007



Source: Youth Risk Behavior Survey, High School

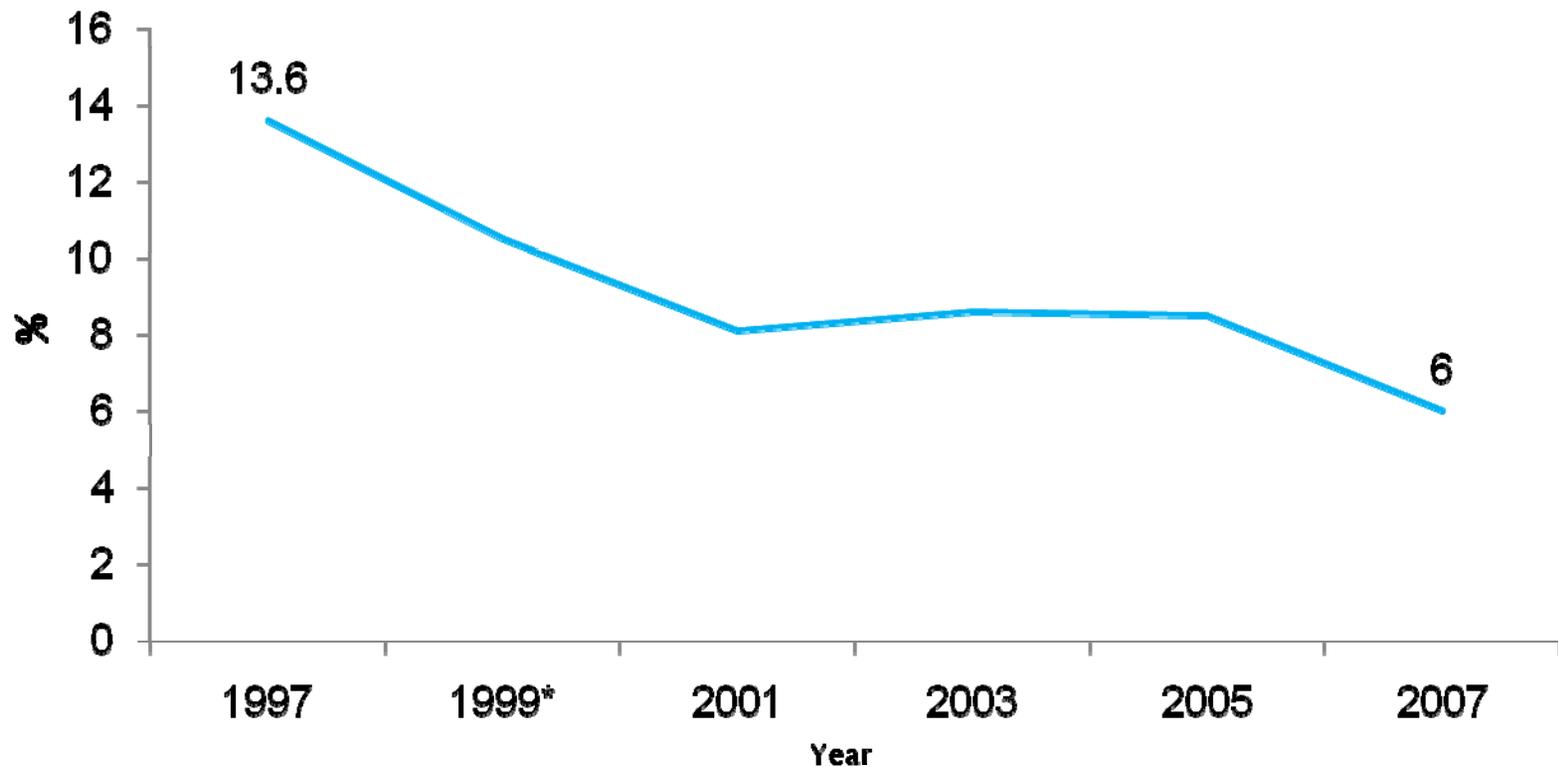
*1999 Maine YRBS data are unweighted and may not be representative of the population

Self-reported suicide attempts among Maine and U.S. high school students by sex, 2001–2007



Source: Youth Risk Behavior Survey, High School

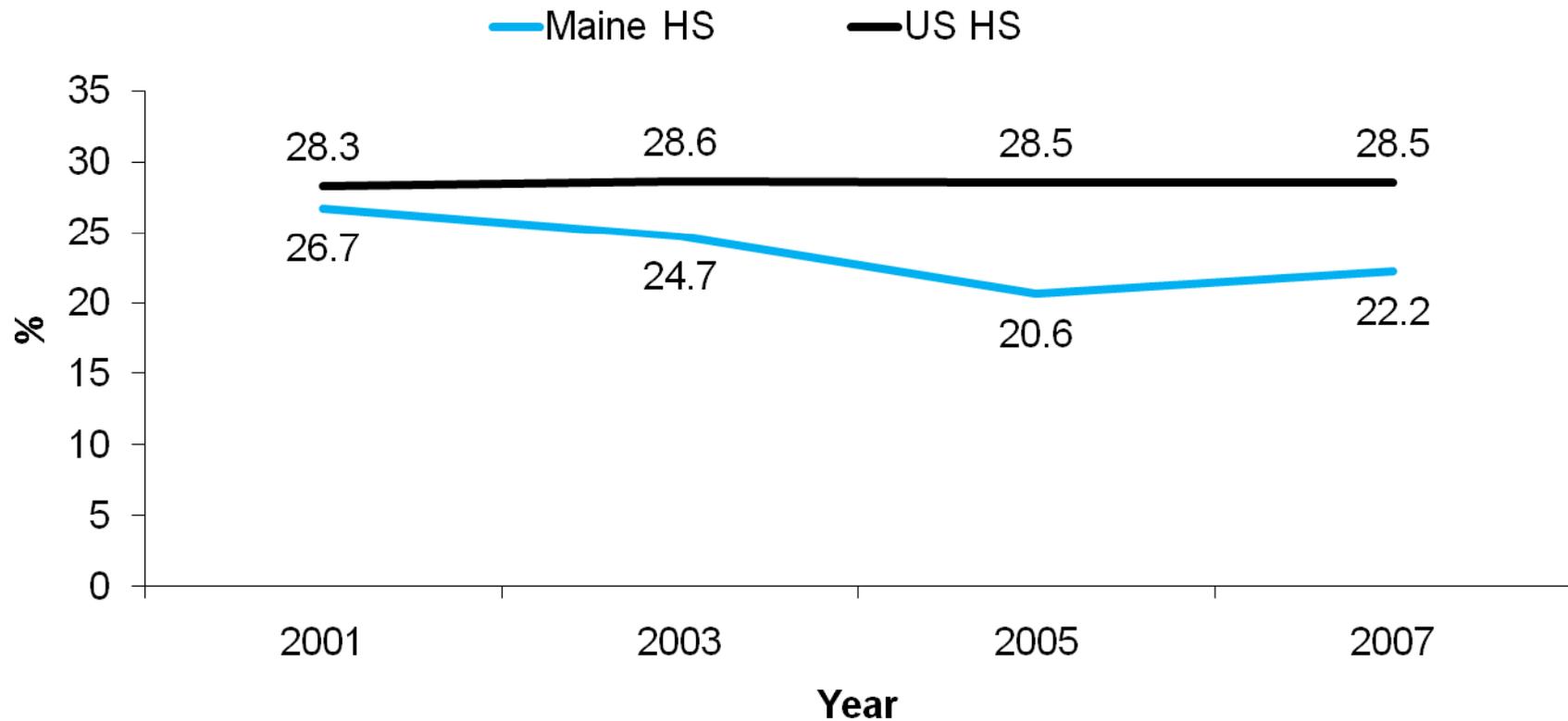
Percent of Maine middle school students who ever attempted suicide 1997–2007



Source: Youth Risk Behavior Survey, Middle School

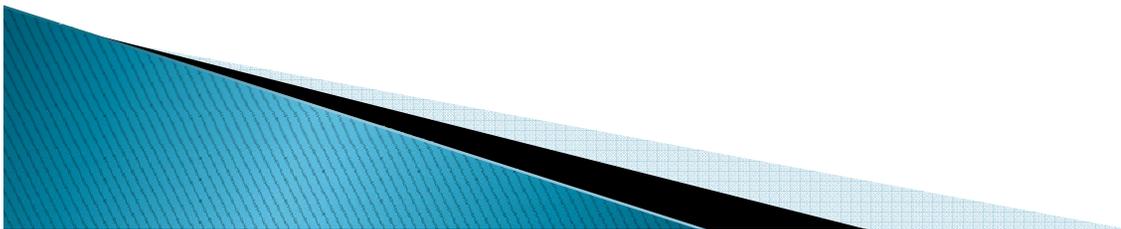
*1999 Maine YRBS data are unweighted and may not be representative of the population

Percent of Maine high school students who reported symptoms of depression in past year, 2001-2007



Source: Youth Risk Behavior Survey, High School

What are the most common factors associated with suicidal ideation and attempts among Maine high school students?

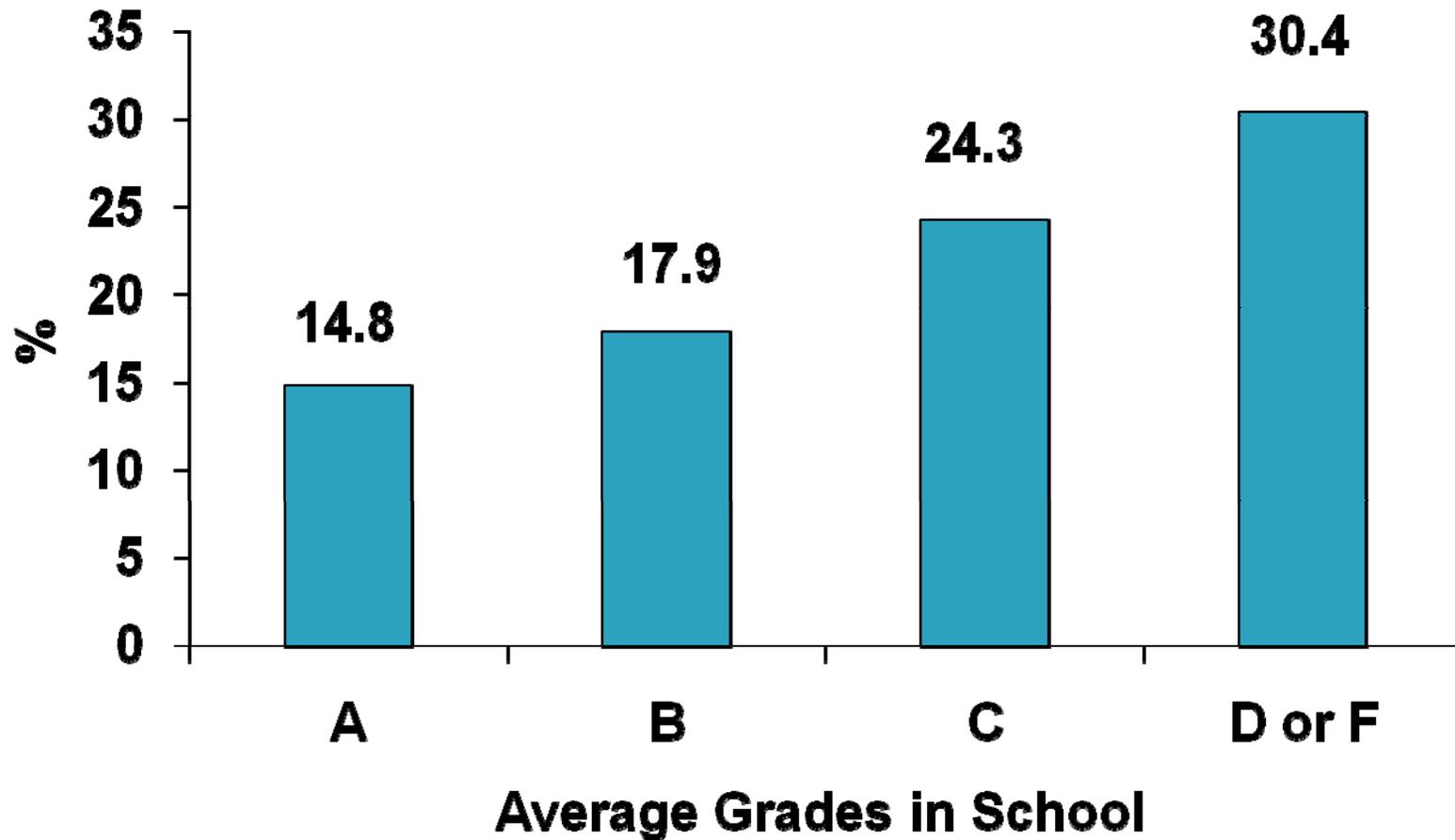


Demographics and Suicide Ideation

		% (95% C.I.)
Grade	9 th	21.4 (19.3, 23.7)
	10 th	22.0 (18.9, 25.5)
	11 th	19.8 (16.3, 23.7)
	12 th	15.0 (12.5, 17.9)
Sex	Girls	23.6 (21.4, 26.0)
	Boys	16.1 (14.1, 18.3)
Race	White	19.5 (17.8, 21.3)
	Am. Indian/AN	19.7 (13.5, 27.9)
	Other	30.1 (24.8, 35.9)

Maine HS YRBS, 2001-2005

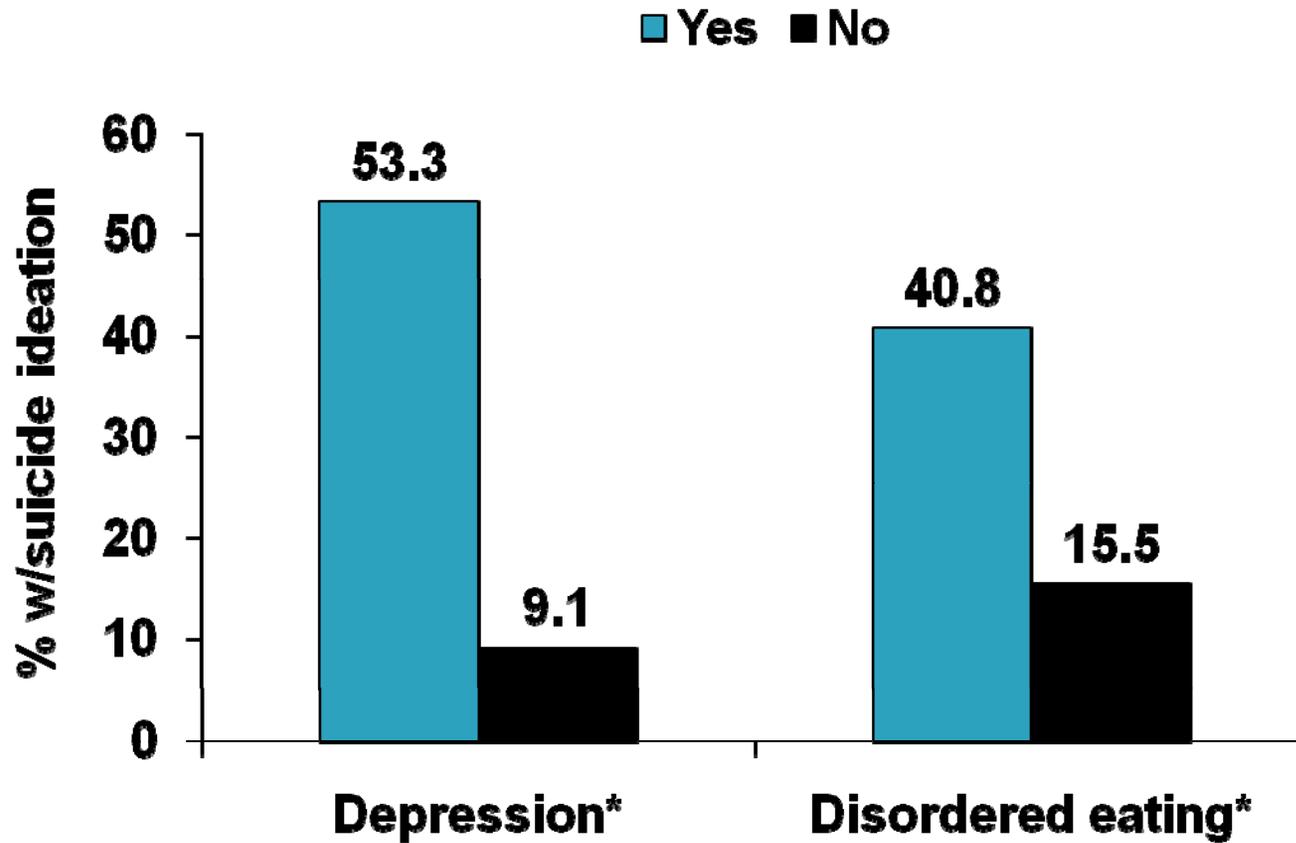
Grades by Suicide Ideation



$p < .05$; A & B vs. C & D

Maine HS YRBS, 2001-2005

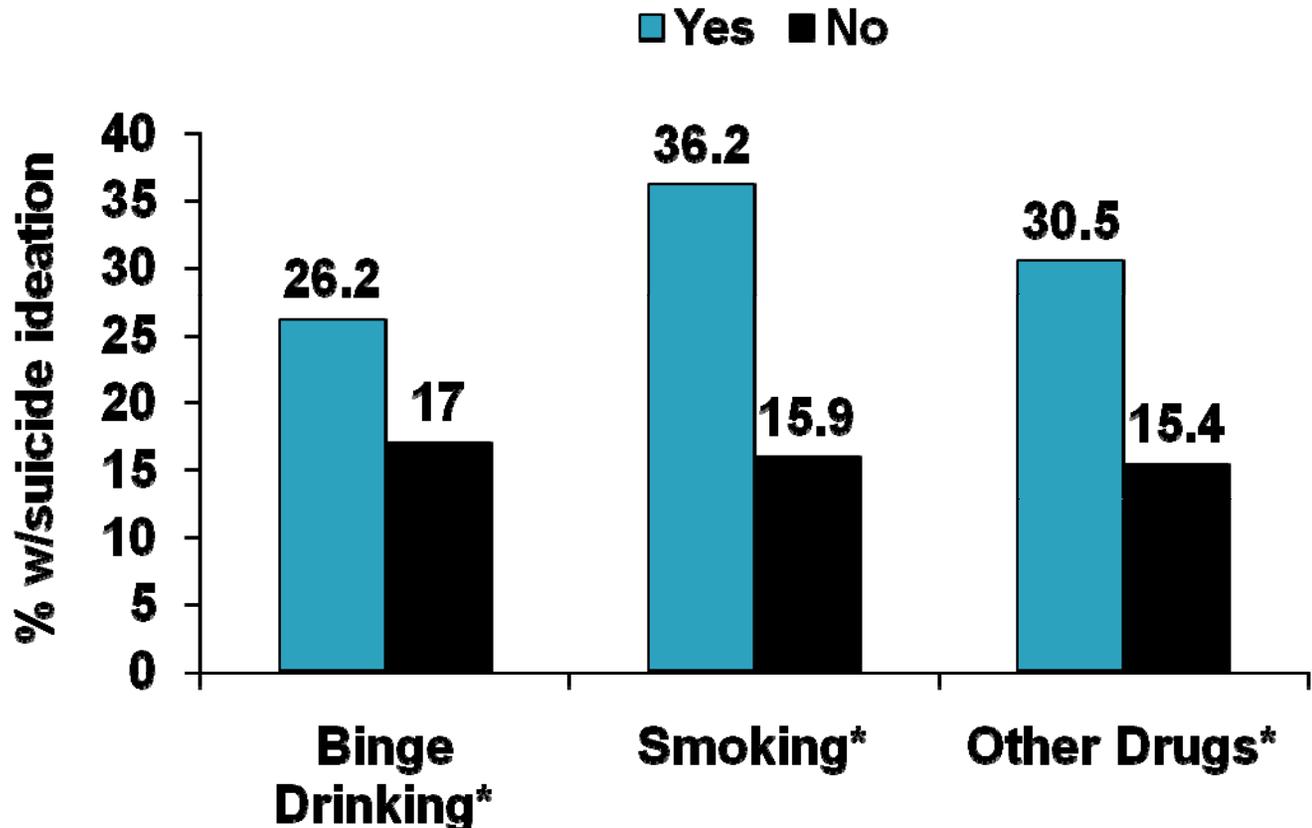
Mental Health by Suicide Ideation



*p<.05

Maine HS YRBS, 2001-2005

Substance Use and Suicide Ideation

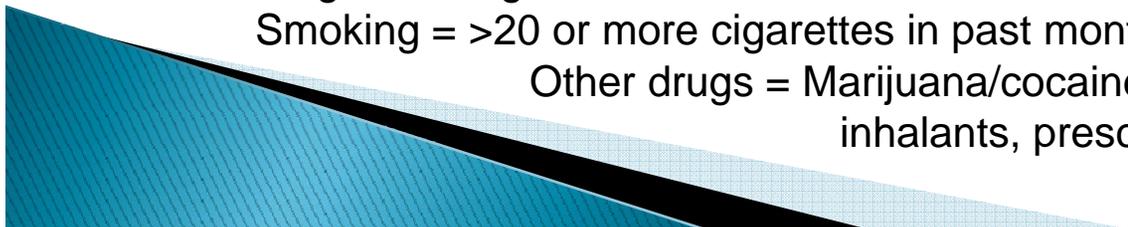


*p<.05

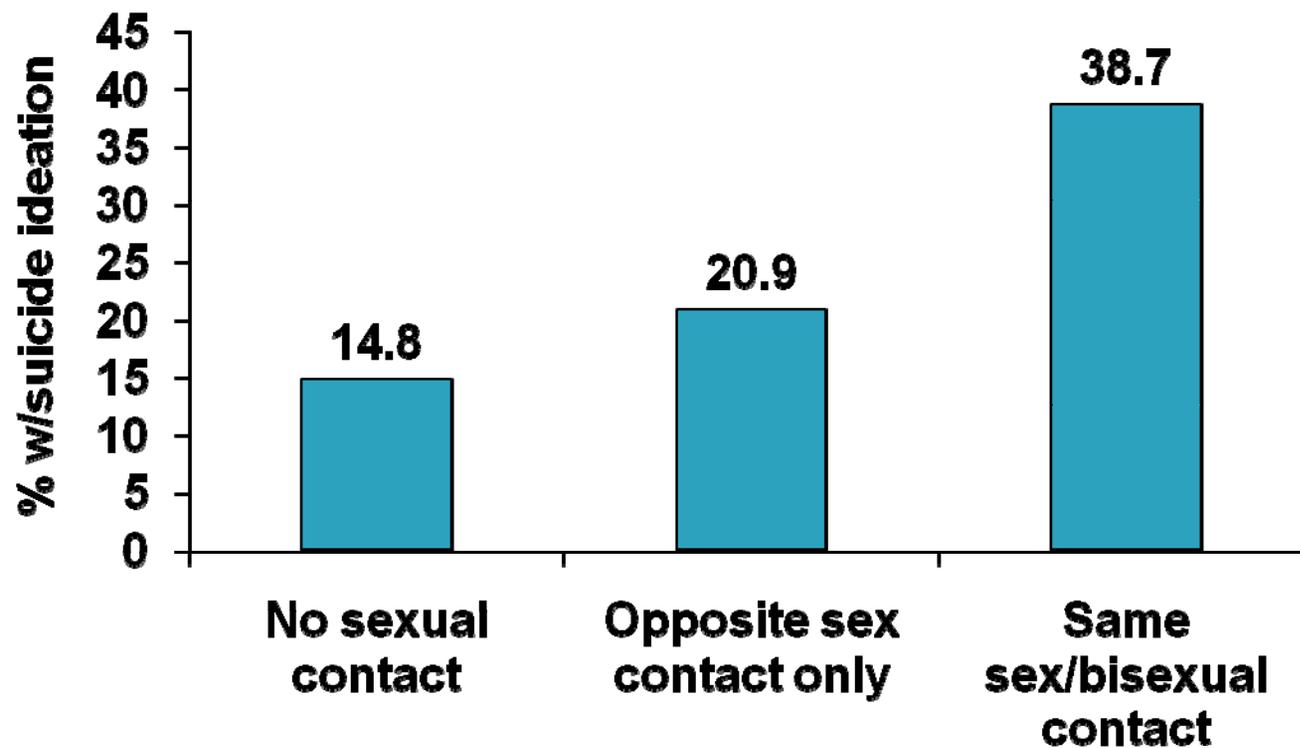
Binge drinking= 5 or more drinks in a row at least once in past month

Smoking = >20 or more cigarettes in past month vs. none

Other drugs = Marijuana/cocaine in past month, lifetime heroin, inhalants, prescription drugs



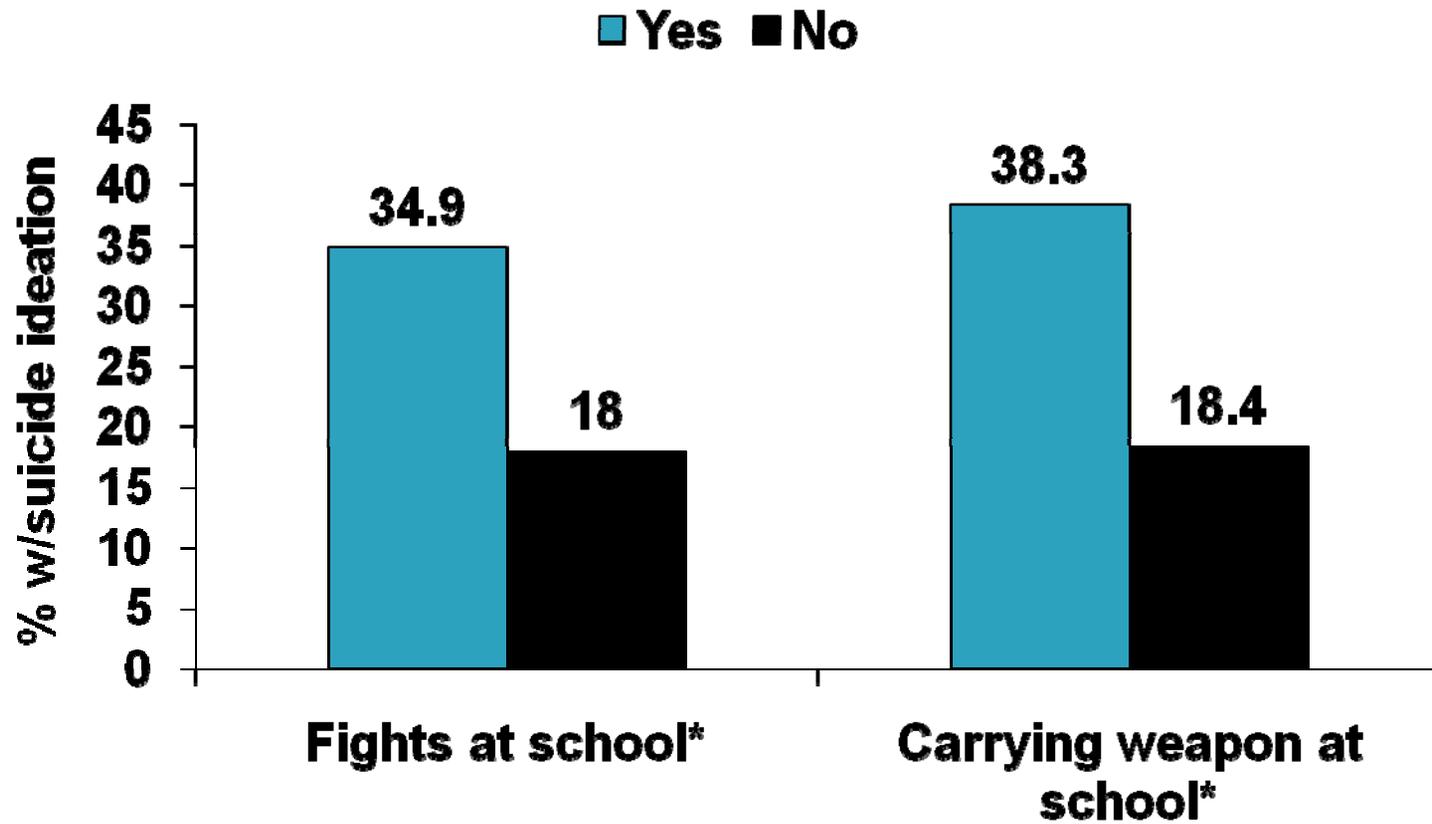
Sexual Contact and Suicide Ideation



$p < .05$

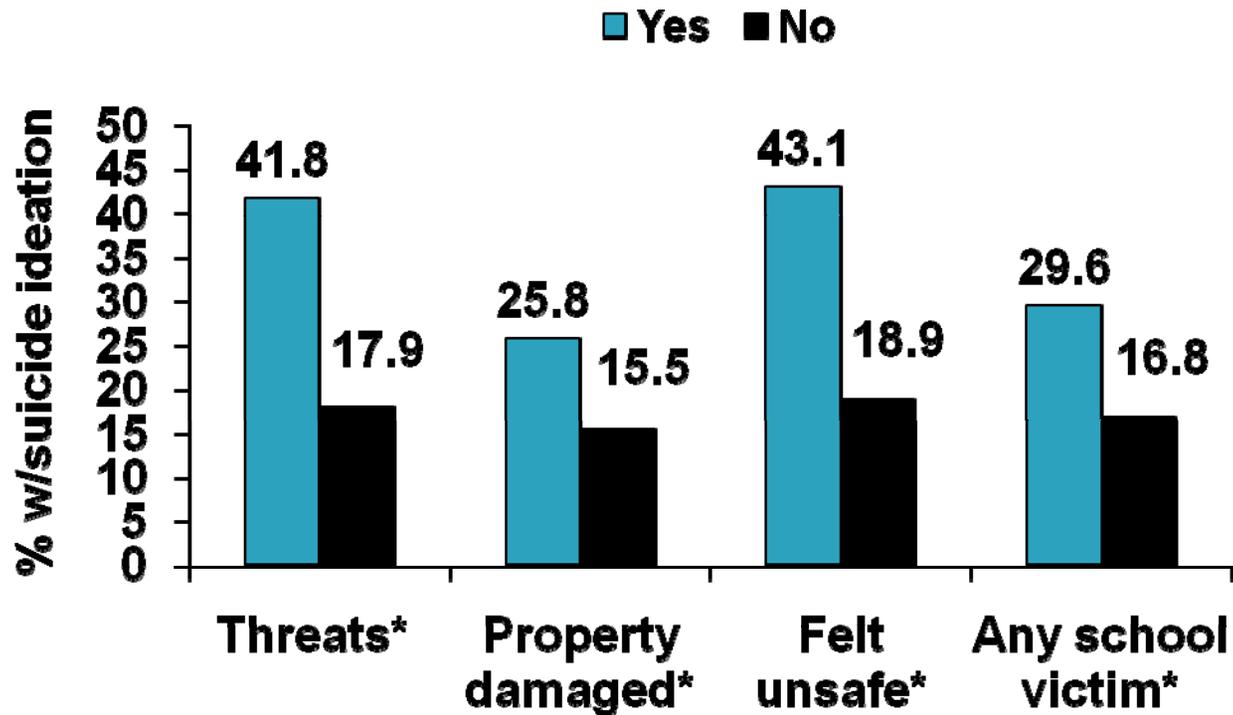
Maine HS YRBS, 2001-2005

Aggressive Behavior and Suicide Ideation



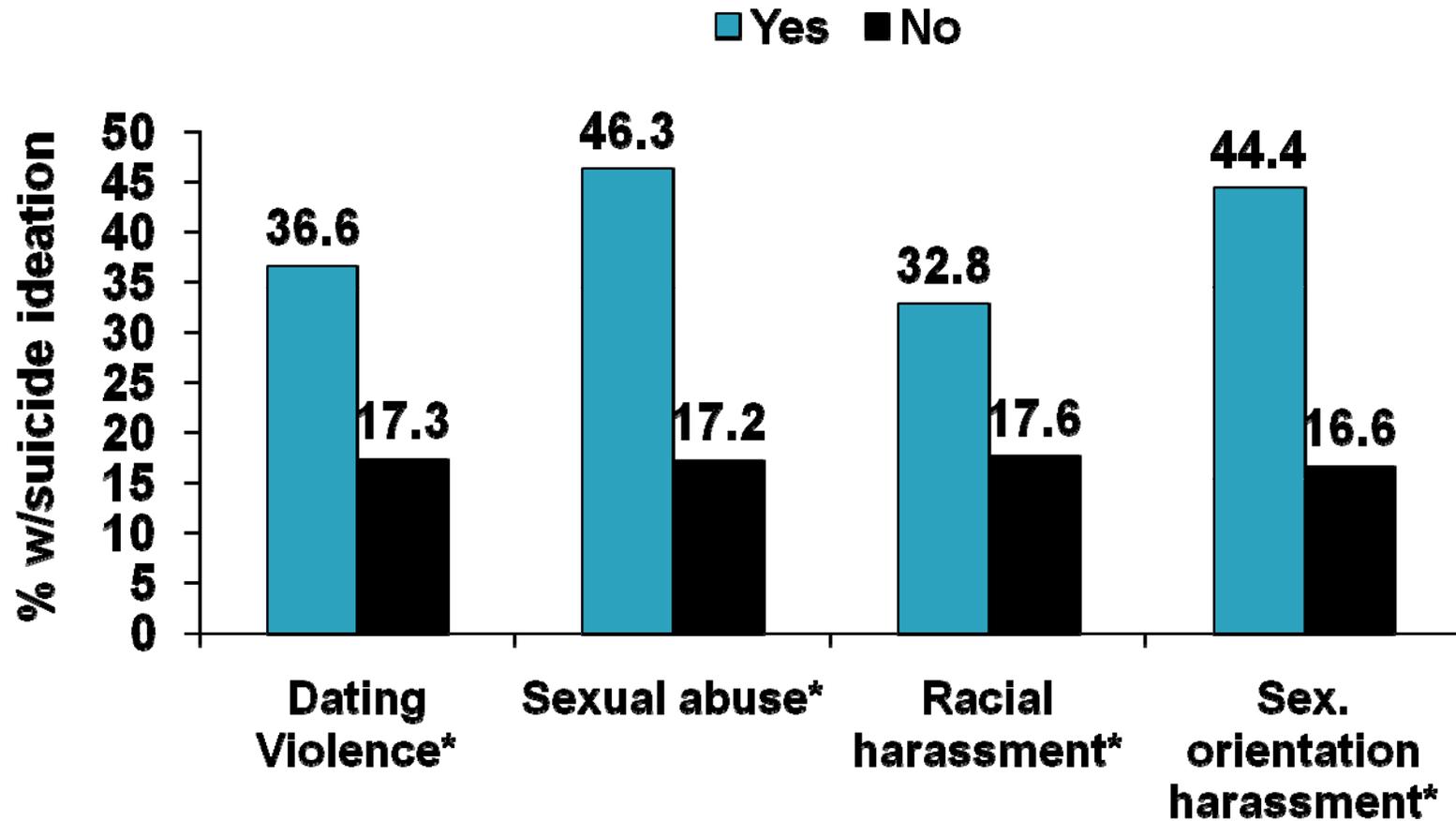
*p<.05

Peer Victimization and Suicide Ideation



*p<.05

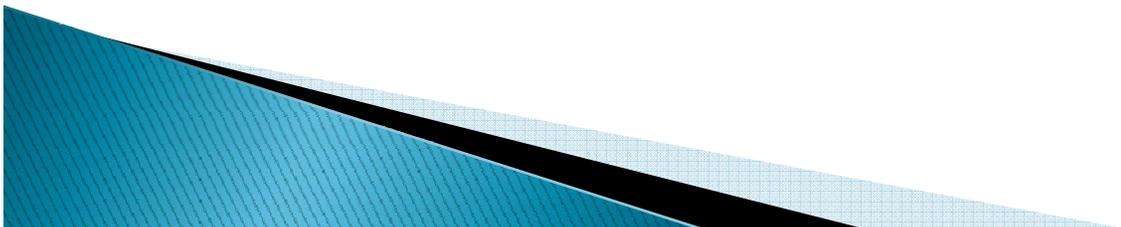
Victimization and Suicide Ideation



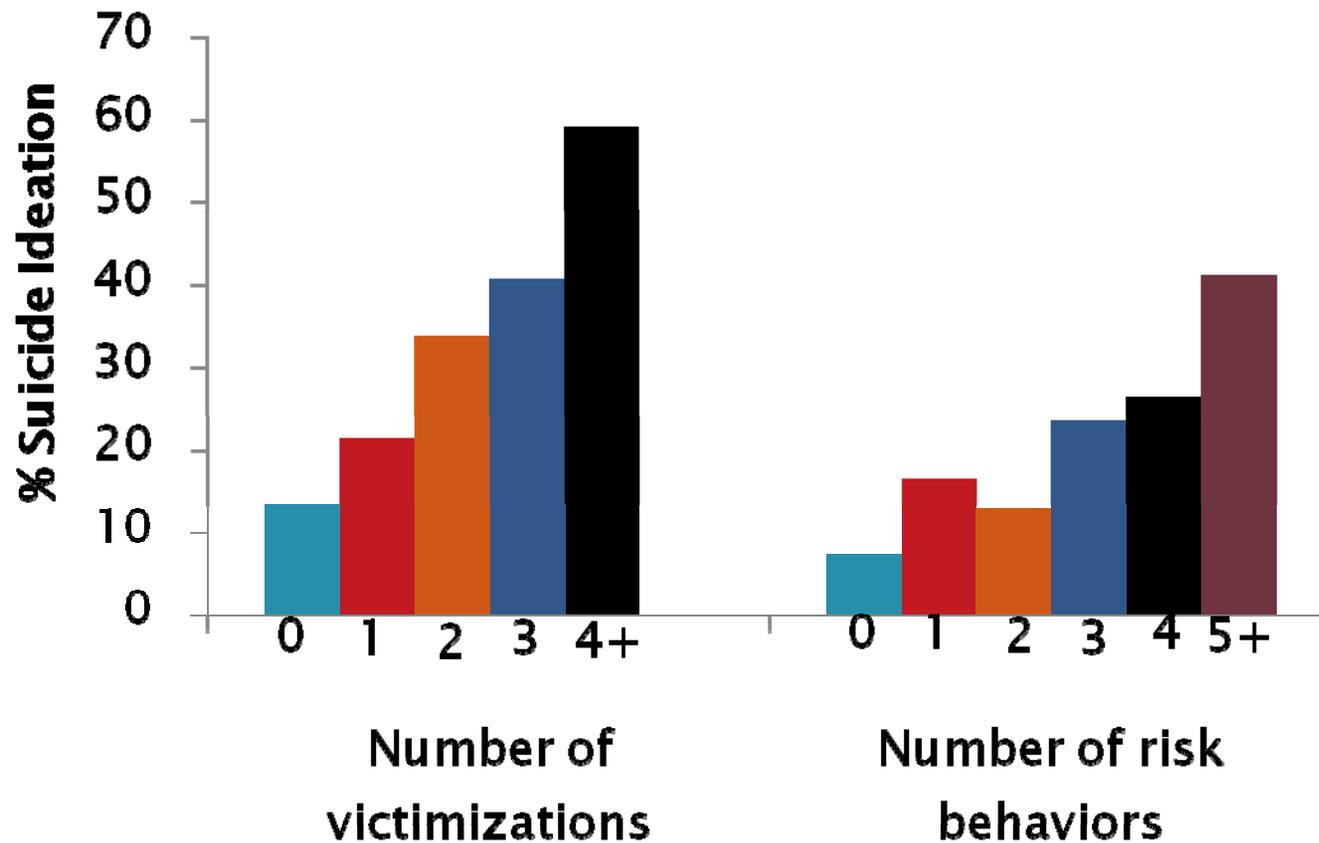
Multiple Victimization and Risk

Victimization=Dating violence, sexual assault, threatened at school, property damaged at school, unsafe at school, racial harassment, sexual orientation harassment

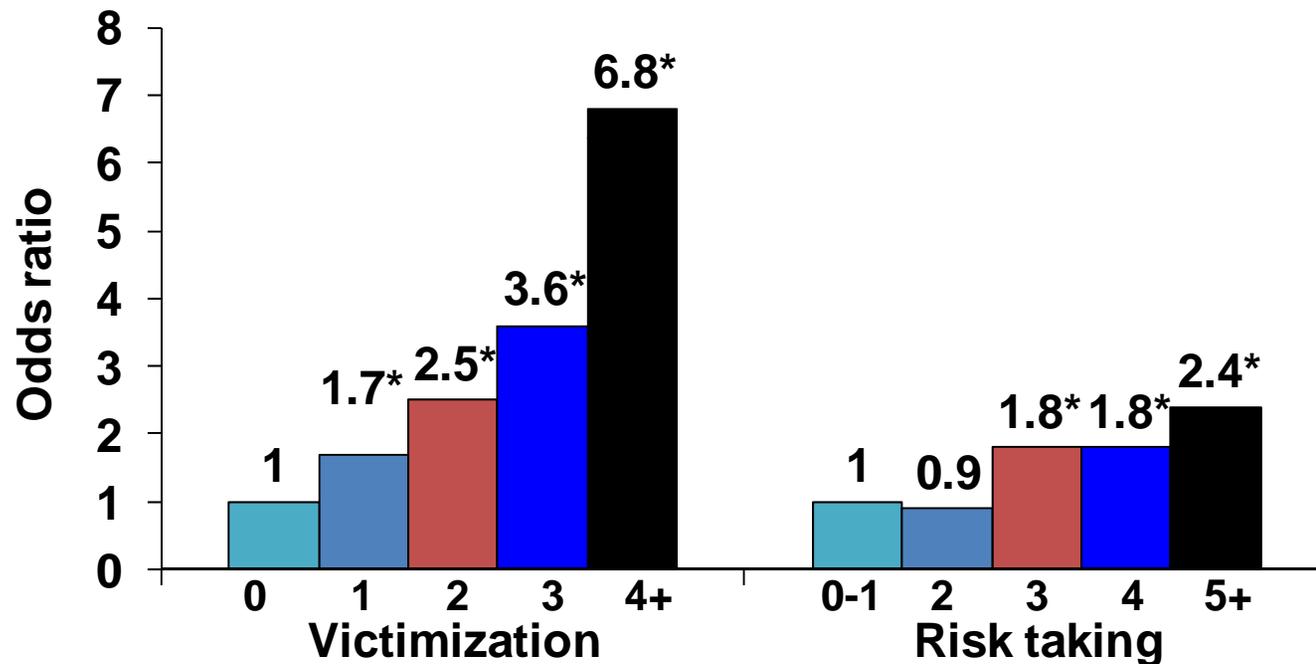
Risk behaviors=low grades, multiple sexual partners, substance use, smoking, binge drinking, fighting at school, weapon to school, eating disorder



Multiple risks and suicide ideation



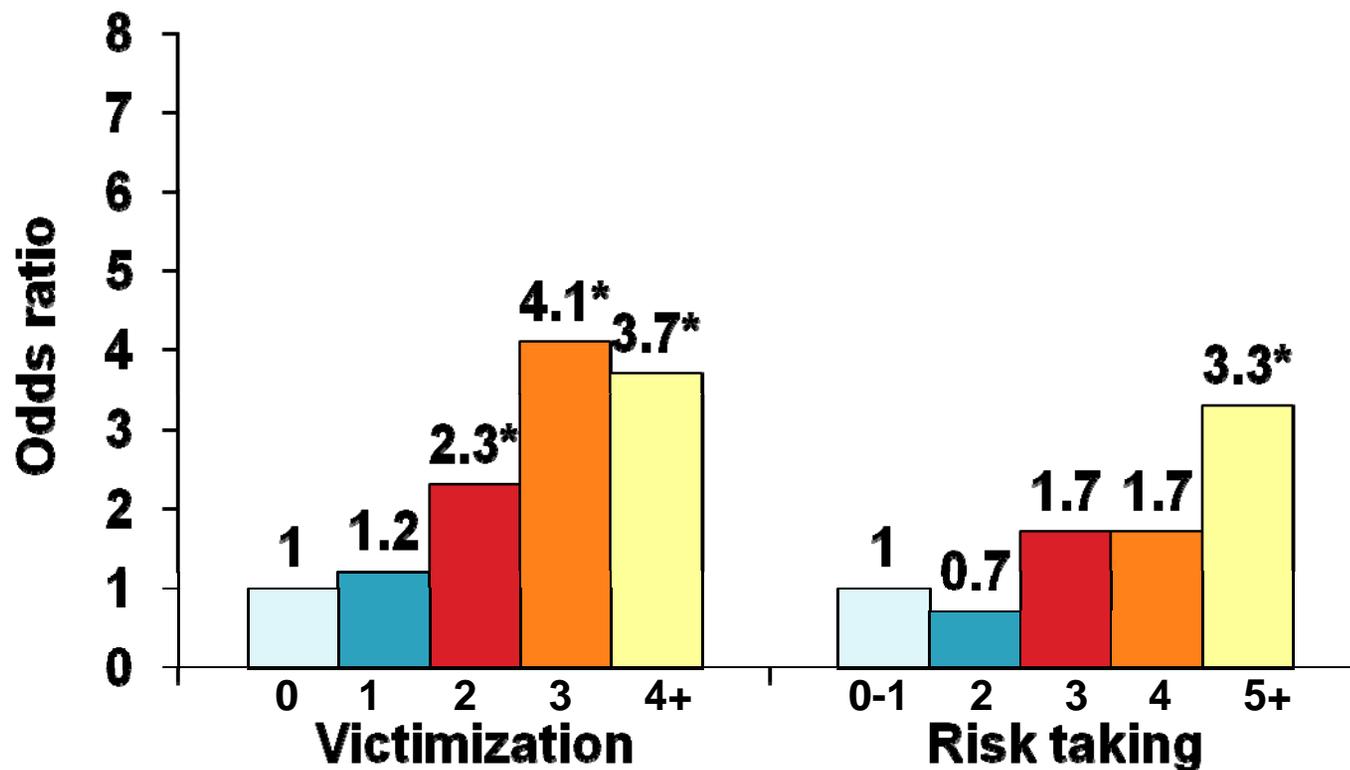
Odds of Ideation by Number of Victimization/Risk Experiences



Adjusted for sex, grade, race, same sex sexual contact

*p<.01

Odds of Suicide Attempt by Number of Victimization/Risk Experiences



Adjusted for sex, grade, race, same sex sexual contact

*p<.01

Summary

- ▶ About 1 in 10 suicides in Maine each year are among those age 10–24.
- ▶ Adolescents and young adults have the highest rates of hospitalization and emergency department visits for self-inflicted injury.
- ▶ 1 in 10 high school students every year considers committing suicide in Maine.
- ▶ Correlates of suicide ideation and attempts in Maine are similar to those found in the literature.
 - Female, low grades, younger, substance use, eating disorders, depression, aggressive behaviors, victimization
- ▶ Multiple victimization experiences and multiple risk factors are associated with increased odds of suicide ideation and attempts.



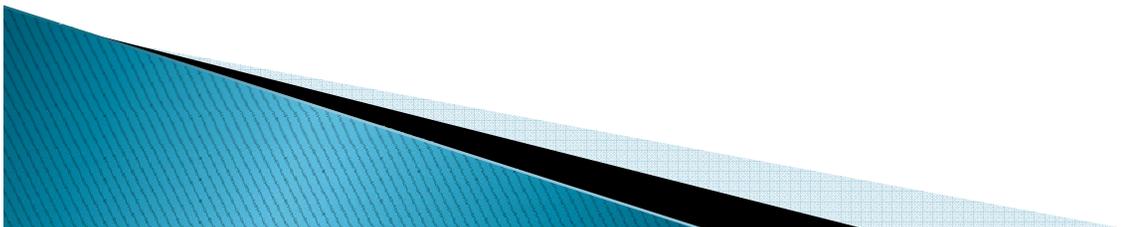
Implications

- ▶ School personnel, clinicians, parents and others who work with youth must be made aware that adolescents who are bullied and/or victimized by peers are at increased risk for suicide ideation and attempts.
- ▶ Those who exhibit multiple risk behaviors may be most at risk for actually attempting suicide.



For more information on youth, injury and suicide data

- ▶ WISQARS (Web-based Injury Statistics Query and Reporting System)
 - <http://www.cdc.gov/ncipc/wisqars>
- ▶ CDC Wonder: <http://wonder.cdc.gov/mortSQL.html>
 - Has county-level data available
- ▶ YRBS (Youth Risk Behavior Survey)
 - National and state: <http://apps.nccd.cdc.gov/yrbss/>
 - Maine: <http://www.mainecshp.com/survey.html>
- ▶ Maine Integrated Youth Health Survey coming in 2009!



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