

# **Exploring factors associated with suicidal ideation and attempts among urban Native youth**

**Data-driven decision making using nationally-representative surveys**

August 11, 2016

# Learning objectives

After attending the presentation, individuals will be able to:

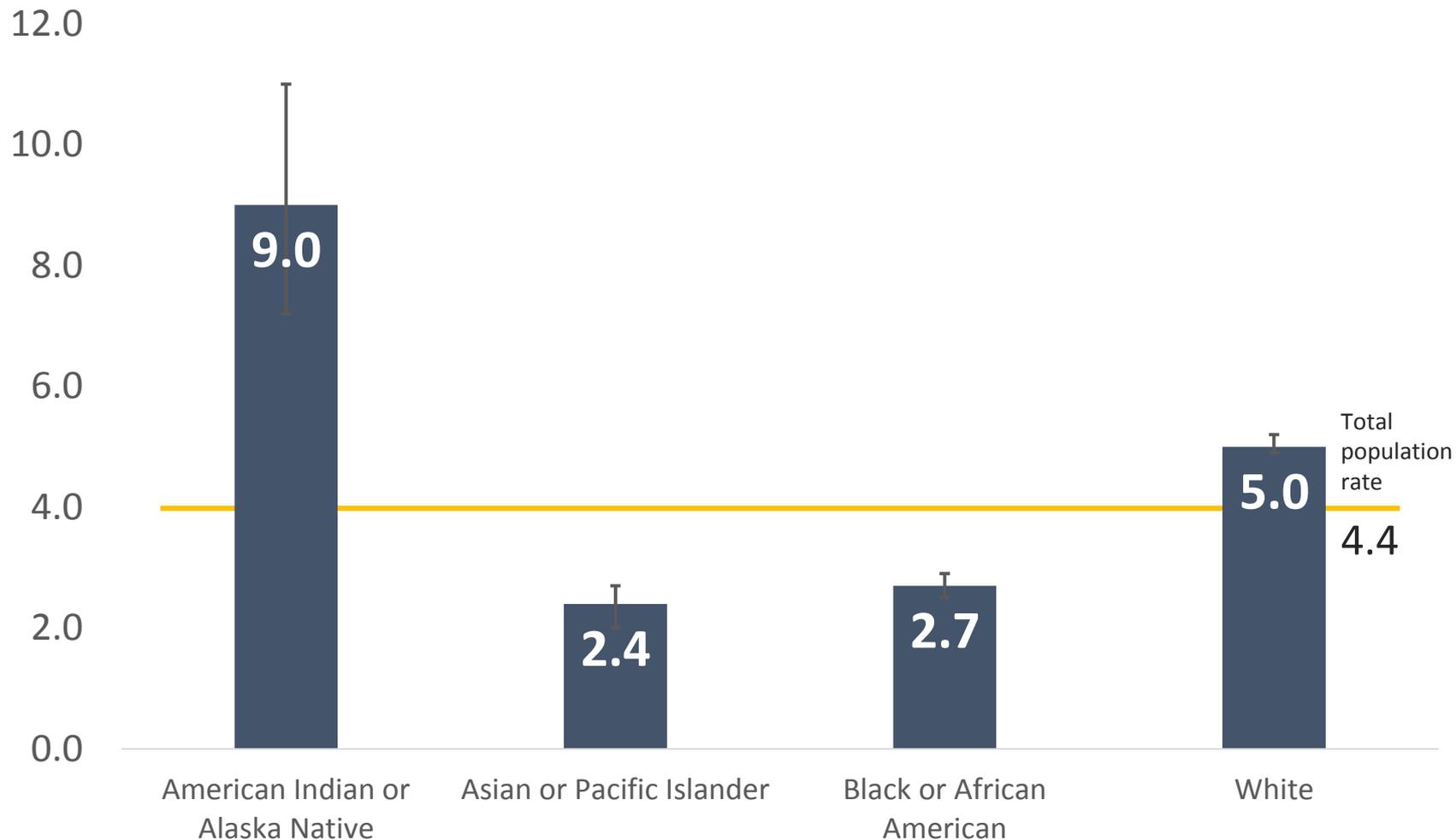
- Identify factors associated with suicidal ideation and attempts among urban American Indian and Alaska Native (AI/AN) youth;
- Discuss the pros and cons of using population-level surveillance data to inform local prevention programs; and
- Recognize culturally-sensitive indicators to inform suicide prevention strategies in urban AI/AN communities.

# Leading causes of death among urban Native youth

Cause of Death	Crude Rate (95% CI)
Accidents (unintentional injuries)	11.8 (9.7 - 13.9)
<b>Intentional self-harm (suicide)</b>	<b>9.0</b> <b>(7.2 - 11.0)</b>
Assault (homicide)	3.2 (2.2 - 4.5)
Malignant neoplasms	Unreliable (1.0 - 2.6)
Diseases of heart	Unreliable (0.5 - 1.8)

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 2008-2014 on CDC WONDER Online Database, released 2015.

## Suicide injury deaths per 100,000 population by race, non-Hispanic ages 12-17, urban areas, 2008-2014



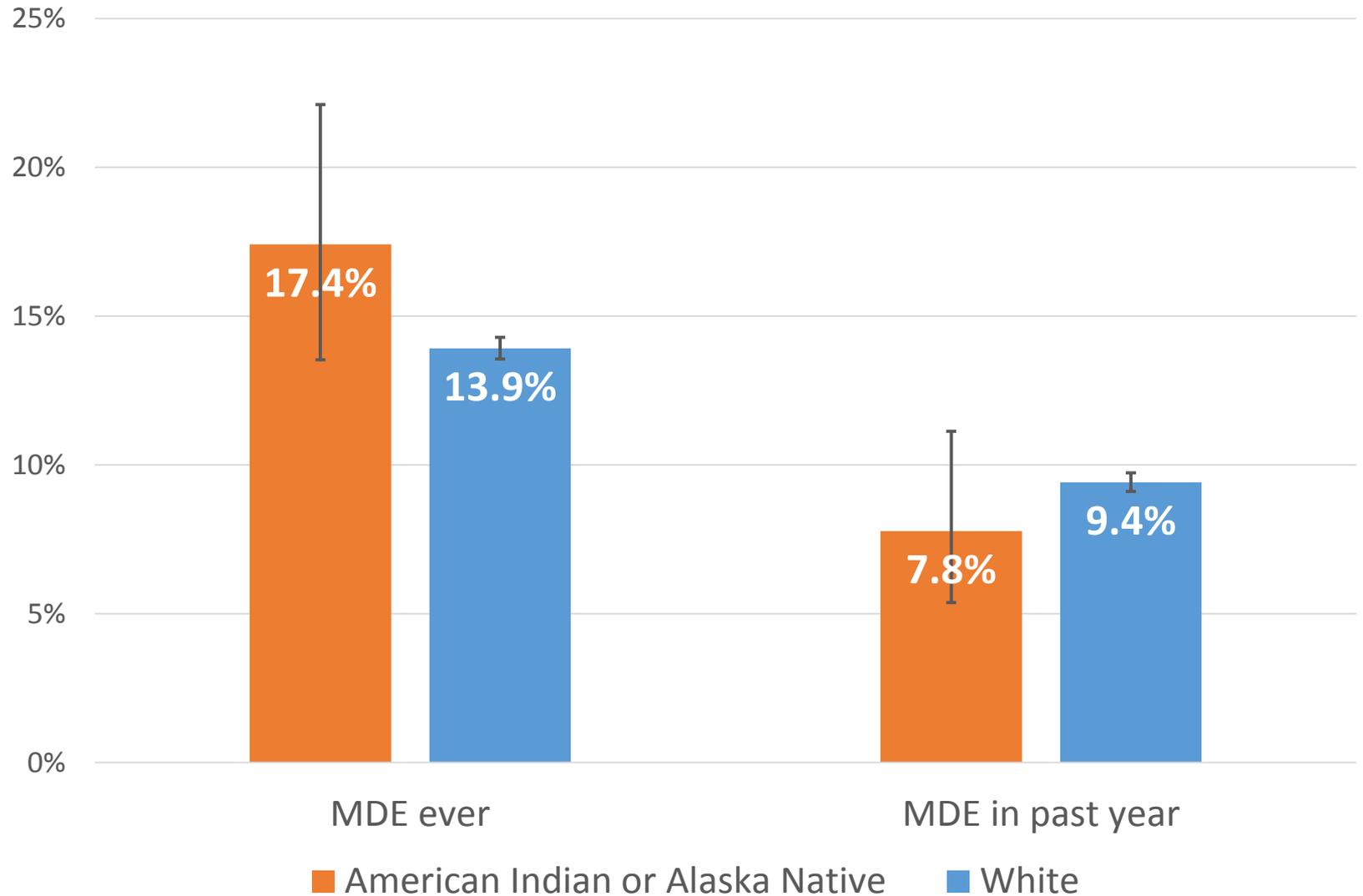
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 2008-2014 on CDC WONDER Online Database, released 2015.

# National Survey on Drug Use and Health

- Conducted by SAMHSA and RTI, International
- We combined data from 2008-2014 (7 years) for this analysis
- 815 urban Native youth (age 12-17, non-Hispanic) in sample
- 51,343 urban White youth (age 12-17, non-Hispanic) in sample

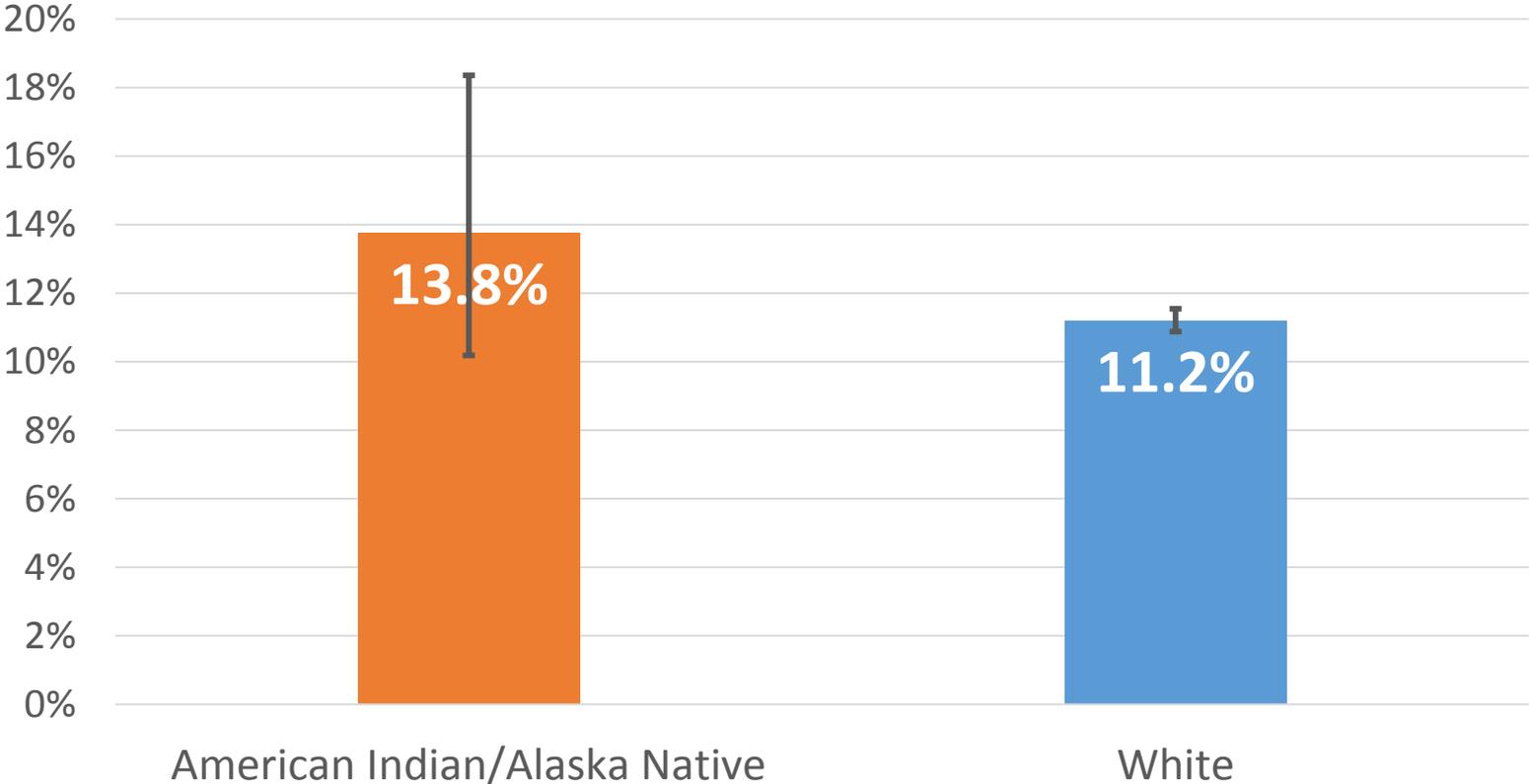
**Note: An asterisk (\*) in this presentation indicates statistical significance.**

# Major depressive episode (MDE) history by race, urban youth aged 12-17, NSDUH 2008-2014



# Suicidal ideation

Any thoughts or plans of suicide, urban youth ages 12-17 who reported a major depressive episode, NSDUH 2008-2014



# **Results: Suicidal ideation risk factors**

# Results – Tobacco use in the past month & suicidal ideation

Race	Odds ratio	P-value	95%Confidence	Interval
American Indian or Alaska Native*	9.05	0.01	1.73	47.06
White*	1.27	0.01	1.06	1.52

Among urban youth who used tobacco in the past month, Native youth were 4.4 times more likely to report thoughts or plans of suicide than white youth (p=0.05, 95% CI: 1.0-19.0).

## Results – Alcohol use in the past month & suicidal ideation

Race	Odds ratio	P-value	95% Confidence Interval
American Indian or Alaska Native	1.23	0.79	0.26 – 5.89
White*	1.29	0.01	1.10 – 1.40

There was no significant difference in suicidal ideation between urban Native youth and White youth who used alcohol in the past month.

## Results – Binge alcohol use in the past month & suicidal ideation

Race	Odds ratio	P-value	95% Confidence	Interval
American Indian or Alaska Native	0.46	0.30	0.10	2.11
White*	1.22	0.03	1.02	1.49

There was no significant difference in suicidal ideation between urban Native youth and White youth who participated in binge alcohol use in the past month.

## Results – Alcohol abuse or dependence in the past year & suicidal ideation

Race	Odds ratio	P-value	95% Confidence Interval	Interval
American Indian or Alaska Native*	6.29	0.01	1.53	25.91
White*	1.66	>0.01	1.32	2.07

There was no significant difference in suicidal ideation between urban Native youth and White youth with alcohol abuse or dependence in the past year.

## Results – Marijuana use ever & suicidal ideation

Race	Odds ratio	P-value	95% Confidence Interval	Interval
American Indian or Alaska Native	2.44	0.07	0.93	6.45
White*	1.36	>0.01	1.18	1.57

There was no significant difference in suicidal ideation between urban Native youth and White youth who had ever used marijuana.

# Results – Illicit drug abuse or dependence in the past year & suicidal ideation

Race	Odds ratio	P-value	95% Confidence Interval	Interval
American Indian or Alaska Native*	7.64	0.05	1.02	57.18
White*	1.96	>0.01	1.57	2.46

There was no significant difference in suicidal ideation between urban Native youth and White youth who reported illicit drug abuse or dependence in the past year.

## Results – Ever had a serious fight at school/work & suicidal ideation

Race	Odds ratio	P-value	95% Confidence	Interval
American Indian or Alaska Native	2.04	0.21	0.66	6.33
White*	1.37	>0.01	1.17	1.59

There was no significant difference in suicidal ideation between urban Native youth and White youth who had ever had a serious fight at school or work.

# **Results: Suicidal ideation protective factors**

## Results – Talked with someone about problems & no suicidal ideation

Race	Odds ratio	P-value	95% Confidence	Interval
American Indian or Alaska Native*	6.53	0.05	0.98	43.57
White*	2.51	>0.01	1.87	3.36

There was no significant difference in suicidal ideation between urban Native youth and White youth who reported that they had talked with someone about their problems.

## Results – Average grade of A, B, or C & no suicidal ideation

Race	Odds ratio	P-value	95% Confidence	Interval
American Indian or Alaska Native	2.35	0.41	0.28	19.86
White*	1.80	>0.01	1.56	2.08

There was no significant difference in suicidal ideation between urban Native youth and White youth who reported average grades of A, B, or C.

## Results – Parent(s) always/sometimes said good job in past year & no suicidal ideation

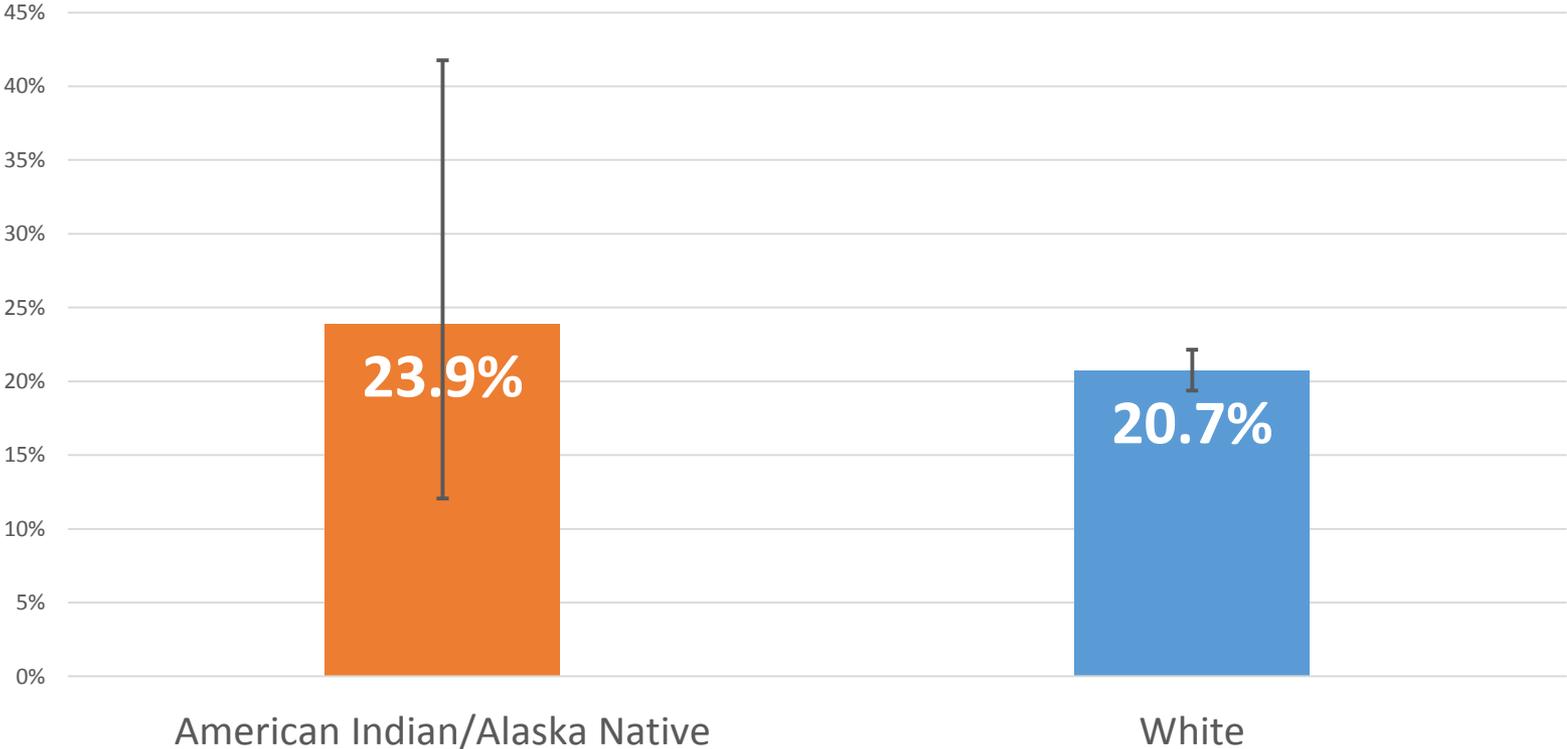
Race	Odds ratio	P-value	95% Confidence	Interval
American Indian or Alaska Native	2.32	0.07	0.93	5.78
White*	1.69	>0.01	1.43	1.99

There was no significant difference in suicidal ideation between urban Native youth and White youth who reported that their parent(s) always or sometimes said good job in the past year.

# Results: Suicide Attempts

# Outcome 2 – Suicide attempts

Suicide attempts among those who reported any thoughts or plans of suicide, urban youth age 12 to 17, NSDUH 2008-2014



# From the literature

Some risk factors associated with suicide attempts among urban Native youth:

- Depression
- Sexual and physical abuse
- Alcohol abuse or dependence
- Family history of suicide
- Historical trauma

# From the literature

Some protective factors associated with no suicide attempts among urban Native youth:

- Social support
- Cultural identity
- Positive relationships with family and friends
- Spiritual orientation
- High GPA
- Effective clinical care for mental, physical, and substance abuse disorders

# Limitations

- Small sample size – only 815 urban Native youth in 2008-2014 datasets
  - Only those who experienced an MDE were asked suicide questions
  - The sample of urban Native youth who attempted suicide was too small to analyze
- NSDUH does not include measures of trauma or cultural identity/spirituality

# Discussion

- Tobacco use in the past month seems to be a strong predictor of suicidal ideation in urban Native youth – Why?
- What risk factors and protective factors related to suicide are in your communities?
- What sources of data do you use to monitor youth suicide in your own communities?

# Discussion

- What indicators would be most useful to your program?
- How can we gather data on these indicators to monitor youth suicide behaviors in our communities?
- How can we effectively advocate for our youth without this data?

# Building an urban Indian suicide surveillance system

- Identify relevant data
- Identify gaps in data
- Identify indicators and analyses that are needed for:
  - Program development
  - Advocacy and education
  - Program proposals
  - Program evaluation
  - Research
- Work together to access and analyze data

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# Decreases in Suicide Deaths and Attempts linked to the White Mountain Apache Suicide Surveillance and Prevention System (2007- 2012)

Mary F. Cwik, PhD

IHS Behavioral Health Conference

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Celebrating Life Surveillance System

# Celebrating Life Surveillance System

- Tribal resolution in 2001
- All community members (all persons, departments, and schools) are responsible for reporting individuals at risk for self-injurious behaviors
- Reportable behaviors include:
  - suicide death
  - suicide attempt
  - suicide ideation
  - non-suicidal self-injury
  - binge substance use

# Celebrating Life Surveillance System

## **CL Process:**

- Report is made
- Behavioral Health Services is notified
- In-person interview to validate report
- Referral to care
- Continued well-fare checks

# Celebrating Life Prevention Program

# Celebrating Life Prevention Programming

Primary intervention targets include:

- **Universal:** community-wide education to promote protective factors and reduce risks
  - **Selected:** early identification and triage of high-risk youth
  - **Indicated:** intensive prevention intervention with youth who attempt suicide and their families
- 
- Activities are supported and guided by a Community Advisory Board and Elders' Council

# Celebrating Life Prevention Programming

## **Universal Activities include:**

- Interagency meetings
- A public education multi-media campaign
- Suicide prevention walks
- Suicide prevention conferences
- Door to door campaign
- Booths at health and tribal fairs

# Celebrating Life Prevention Programming

## **Selected and Indicated Activities include:**

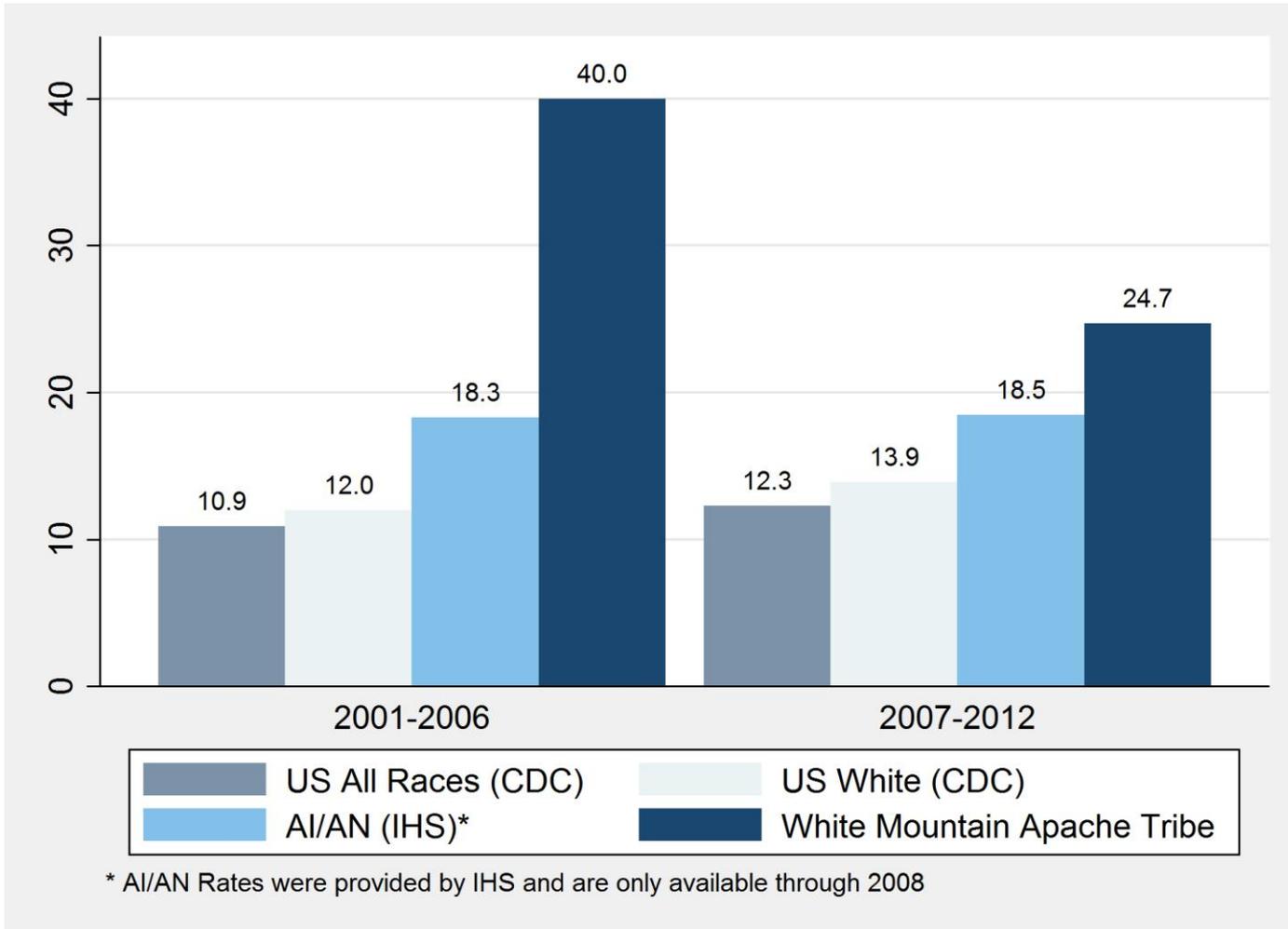
- ASIST Trainings
- Cultural and strengths-based activities led by Apache Elders
  - Elementary school workshops
  - Middle school curriculum
  - Field Trips
- Brief intervention (2-4 hours) with a powerful, locally adapted video and manualized curriculum (“New Hope”)
- Multi-session life skills curriculum (based on AILSDC)

Celebrating Life Impact

# Celebrating Life Evaluation

- Numbers of suicide deaths and attempts (**numerators**) came from the surveillance system
- Numbers for the total and age-specific tribal population sizes (**denominators**) came from 2007–2012 Indian Health Service (IHS) estimates for the Whiteriver Service Unit, which serves the Fort Apache Indian Reservation
- We calculated **age-adjusted suicide rates** by using the 2010 US Census population as the reference population

# Celebrating Life Results – Suicide Deaths



# Celebrating Life Results – Suicide Deaths

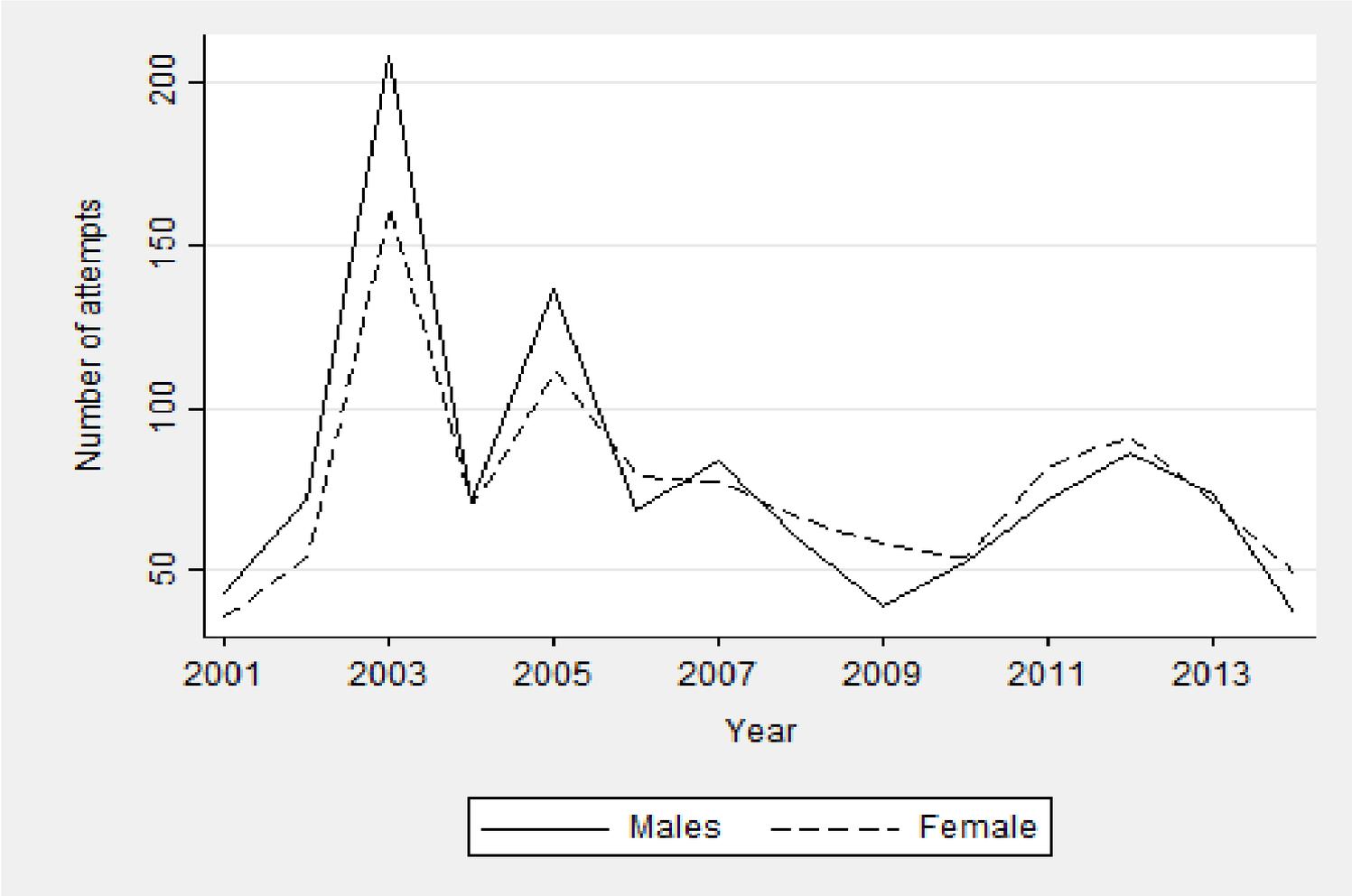
Apache Death Incidence Rate Per 100,000

<b>Age Group</b>	2001-2006	2007-2012	Percent Change
<b>0-4</b>	0	0	-
<b>5-9</b>	0	0	-
<b>10-14</b>	17.1	23.6	38.0%
<b>15-19</b>	107.8	101.9	-5.5%
<b>20-24</b>	151.9	96.0	-36.8%
<b>25-34</b>	95.0	37.9	-60.1%
<b>35-44</b>	23.3	9.1	-60.9%
<b>45-64</b>	15.5	11.7	-24.5%
<b>65+</b>	0	0	-
<b>Total (all ages)</b>			
<b>Age-Adjusted</b>	40.0 (27.8, 52.1)	24.7 (16.3, 36.2)	-38.3%

# Characteristics of Suicide Deaths

- 29 suicide deaths
- **Age:** 72% under 25 years old; average age 23
- **Gender:** 66% male; 85% in 2001-2006
- **Methods:** 90% hanging
- **Substances:** 59% drinking at the time
- **Precipitating Factor:** 62% interpersonal conflict

# Celebrating Life Results – Suicide Attempts



- 433 attempts (366 individuals)
- **Age:** 69% under 25 years old; average age 23
- **Gender:** ~50% male; same as 2001-2006
- **Methods:** 44% overdose, 29% hanging
- **Substances:** 73% using substances; 56% alcohol
- **Precipitating Factor:** 33% interpersonal conflict

- Despite decrease, highest incidence still ages 15-19
  - For both deaths and attempts
  - Creative prevention intervention approaches needed
- Role of alcohol
  - Alcohol use co-occurred in more than half of all deaths and attempts
- Young Apache women seem to be at increasing risk
- Deaths among parents:
  - 48% had children, up from 5% in 2001-2006; Females (60%) more often parents than males (42%)
- Cyclical pattern of deaths
  - “Peaks” appearing every 3 years
- Age is protective
  - No deaths in individuals over the age of 49

- Comprehensive, population-specific prevention approaches, like the White Mountain Apache model, can reduce suicide deaths and attempts
- Tribally-mandated surveillance provided the foundation to identify, provide services and track outcomes for individuals and communities at elevated risk for suicide
- Community surveillance systems allow for in depth, accurate, high quality data and is critical in prevention programming and evaluation