

Adolescent suicidal behavior: *National trends and new data from California*



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A bit of background

- Assistant Prof. of Public Health, U.C. Merced
 - Social determinants of suicidal behavior
 - Health consequences of suicidal behavior
 - Using large secondary data sources to understand population mental health



Why research suicide? Why present here today?



Suicide affects children and families

- Important subject to be aware of...
- Yet very rarely talked about



Many ways to be affected by suicide

- As a survivor (a loved one attempted or died by suicide)
- As a clinician/social worker/professional
- As someone worried about a loved one at risk
- As an attempter or someone who has considered suicide



Definition of suicide

- Suicide fatality: *“Death caused by self-directed injurious behavior with any intent to die as a result of the behavior.”*
- Nonfatal suicidal behavior: *“Self-directed injurious behavior with any intent to die as a result of the behavior.”*
 - Excludes “cutting” and other non-suicidal self-injury (NSSI)

Crosby et al. 2011. *Self-directed violence surveillance: Uniform definitions and recommended data elements, Version 1.0*. Atlanta, GA: Centers for Disease Control and Prevention.



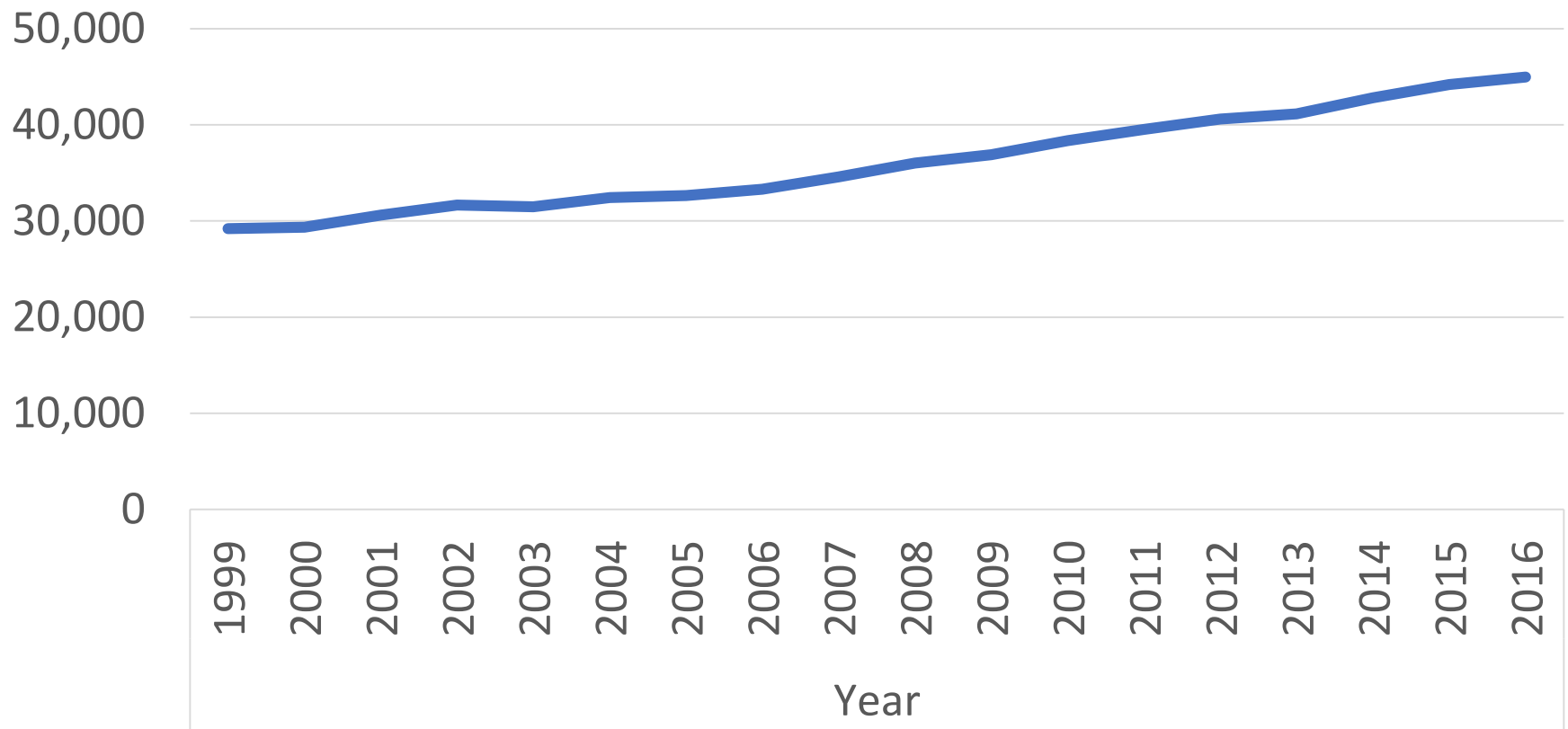
It's more common than you think

- *United States, 2016:*
 - **44,965** suicide deaths
 - 10th leading cause of death overall
 - Among youths aged 10-24: 2nd leading cause
 - Among midlife adults aged 35-64: 5th leading cause
 - How does this compare to other causes of death?
 - Heart disease: 633,842
 - Breast cancer: 40,290
 - Opioid overdose: 33,091
 - Homicides: 17,525



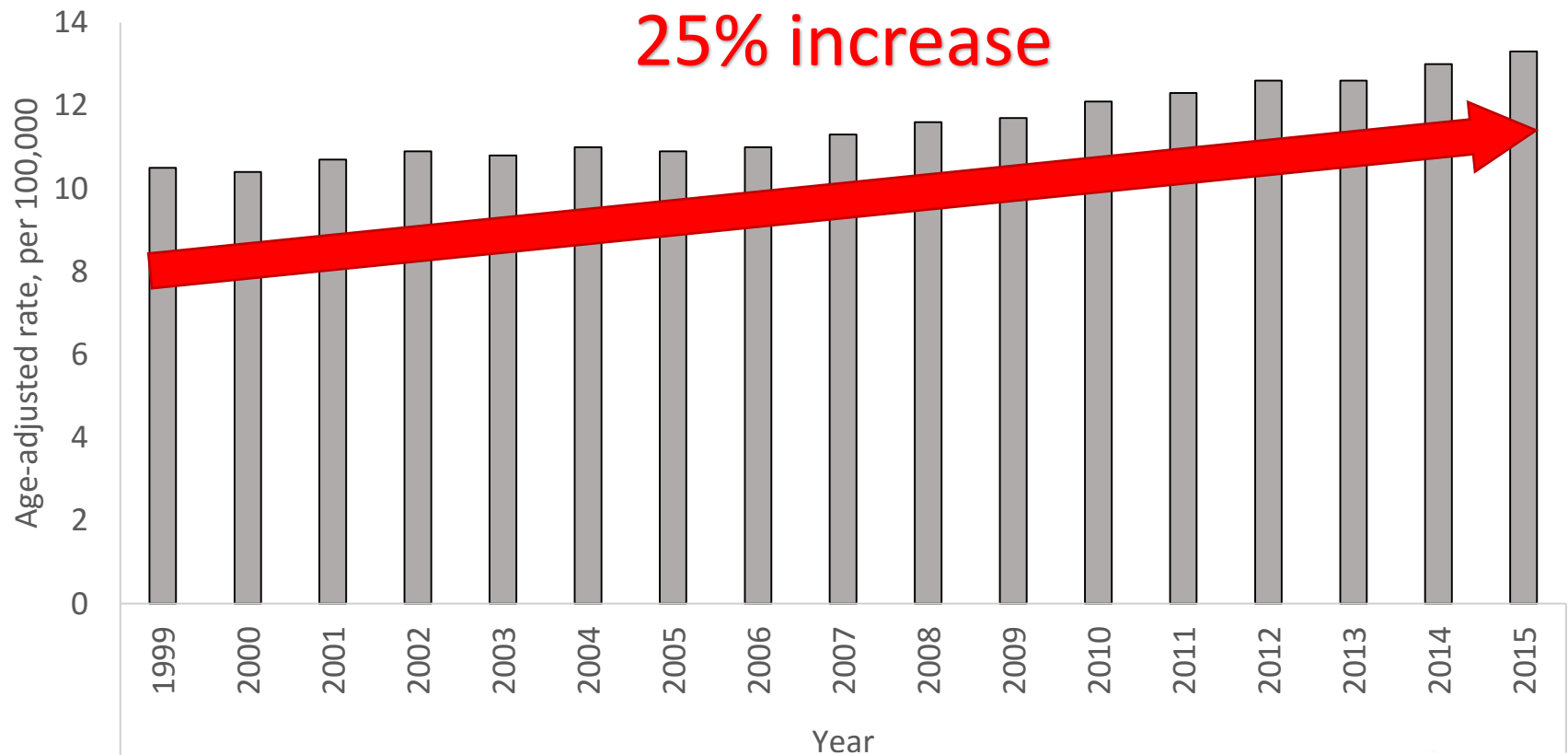
Suicide is a major public health problem

Number of suicide deaths (U.S.)



Suicide is a major public health problem

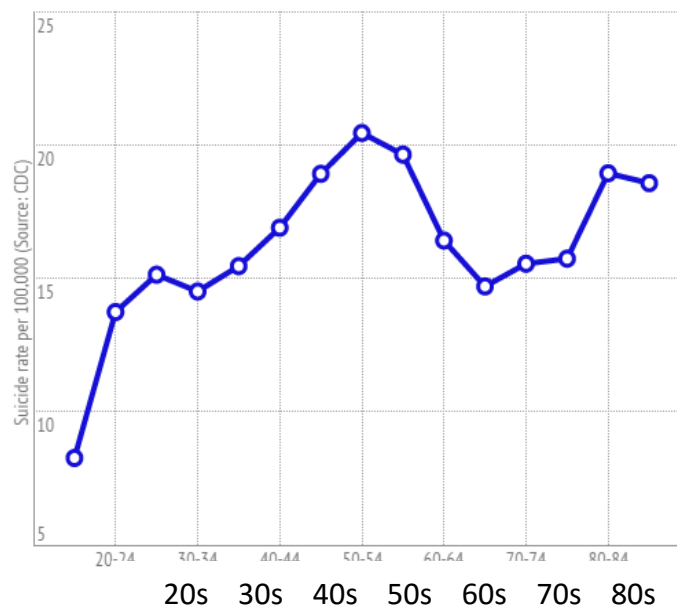
Age-adjusted U.S. suicide rates by year, 1999-2015



Suicide across the ages

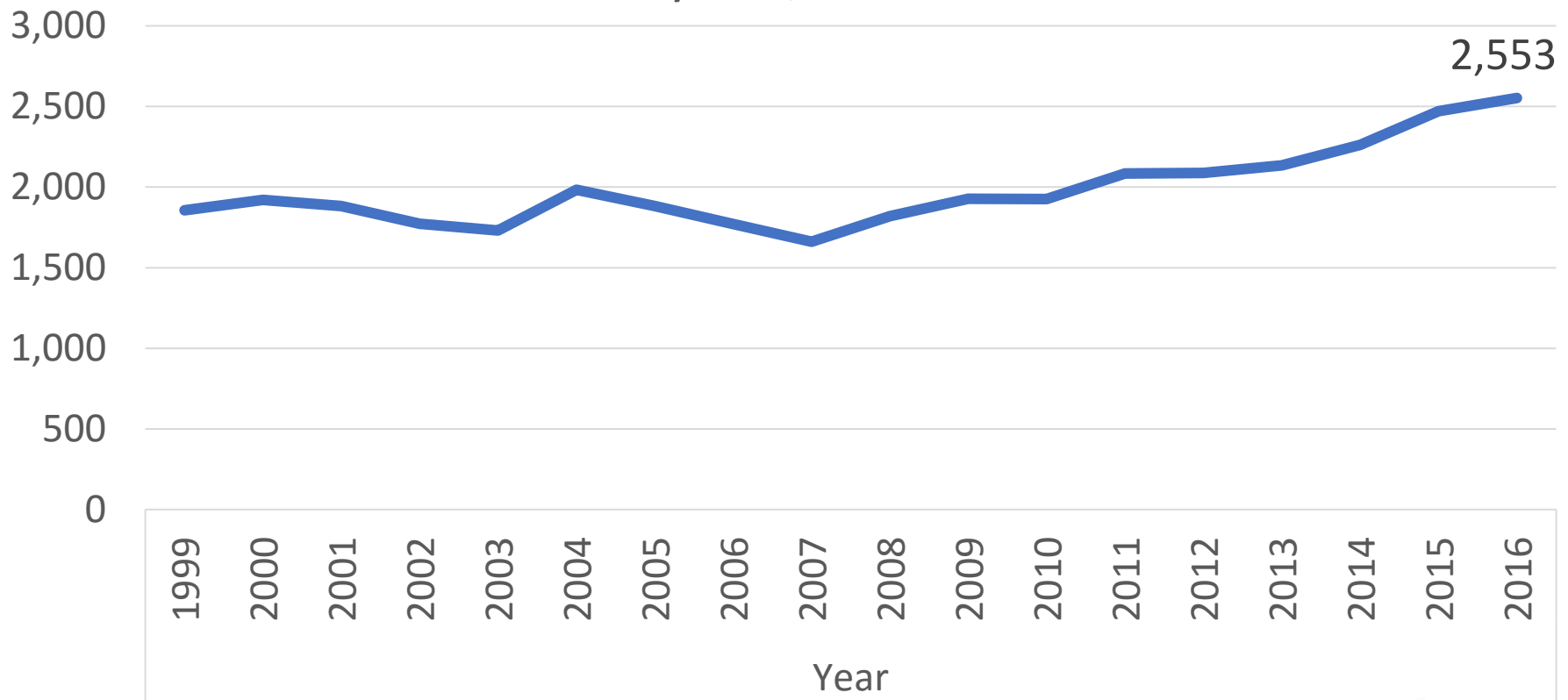
- Men, middle aged, and older people have highest suicide rates
- However, suicide is the second leading cause of death among adolescents (ages 10-19)
 - ~ 2,550 died in 2016
 - Firearm (45%), suffocation (40%), and poisoning (8%) are dominant methods

2013 U.S. Suicide Rate By Age Group

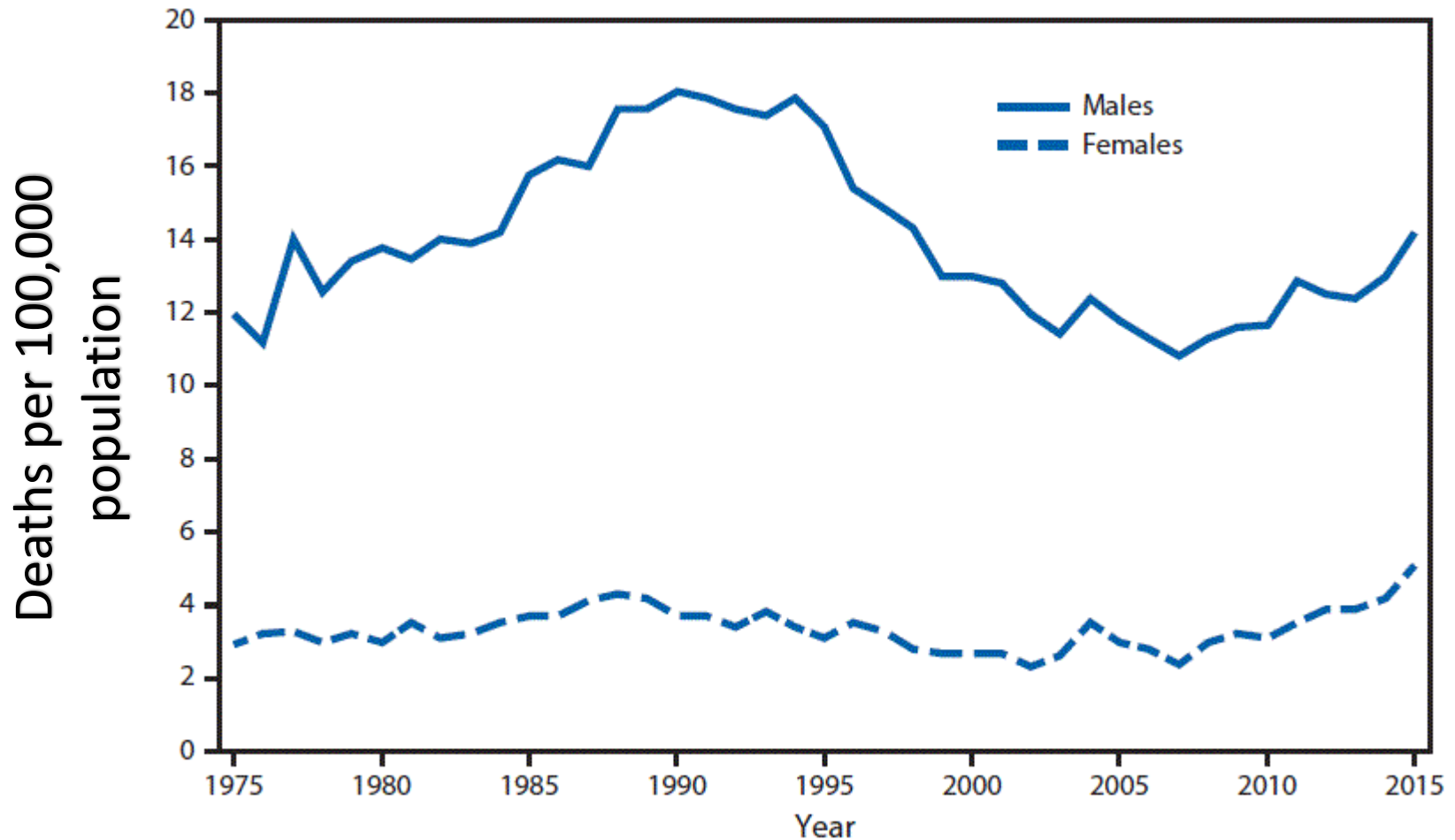


Adolescent suicidal behavior: National

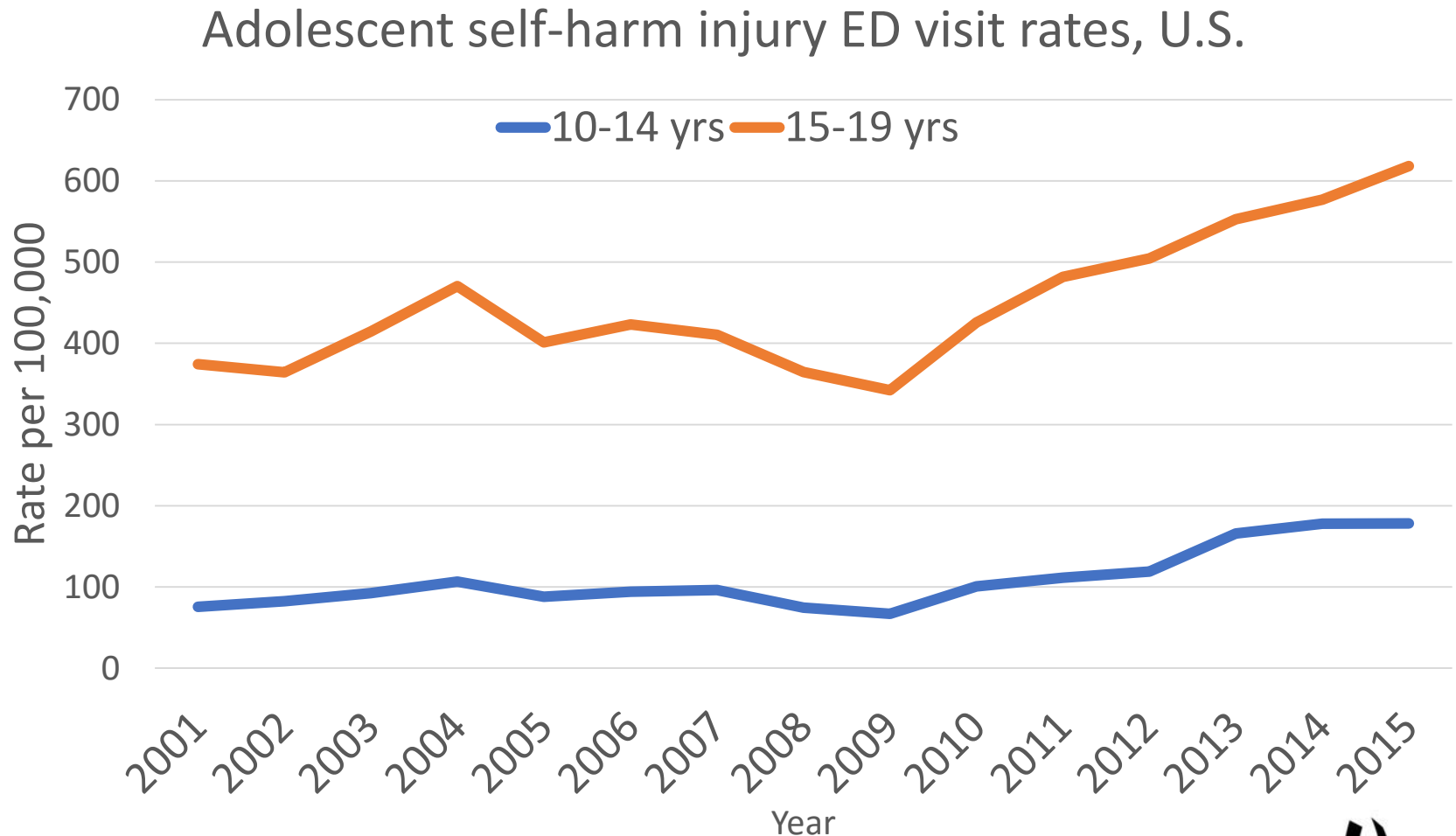
Number of suicide deaths, adolescents aged 10-19 years, U.S.



Adolescent suicidal behavior: National

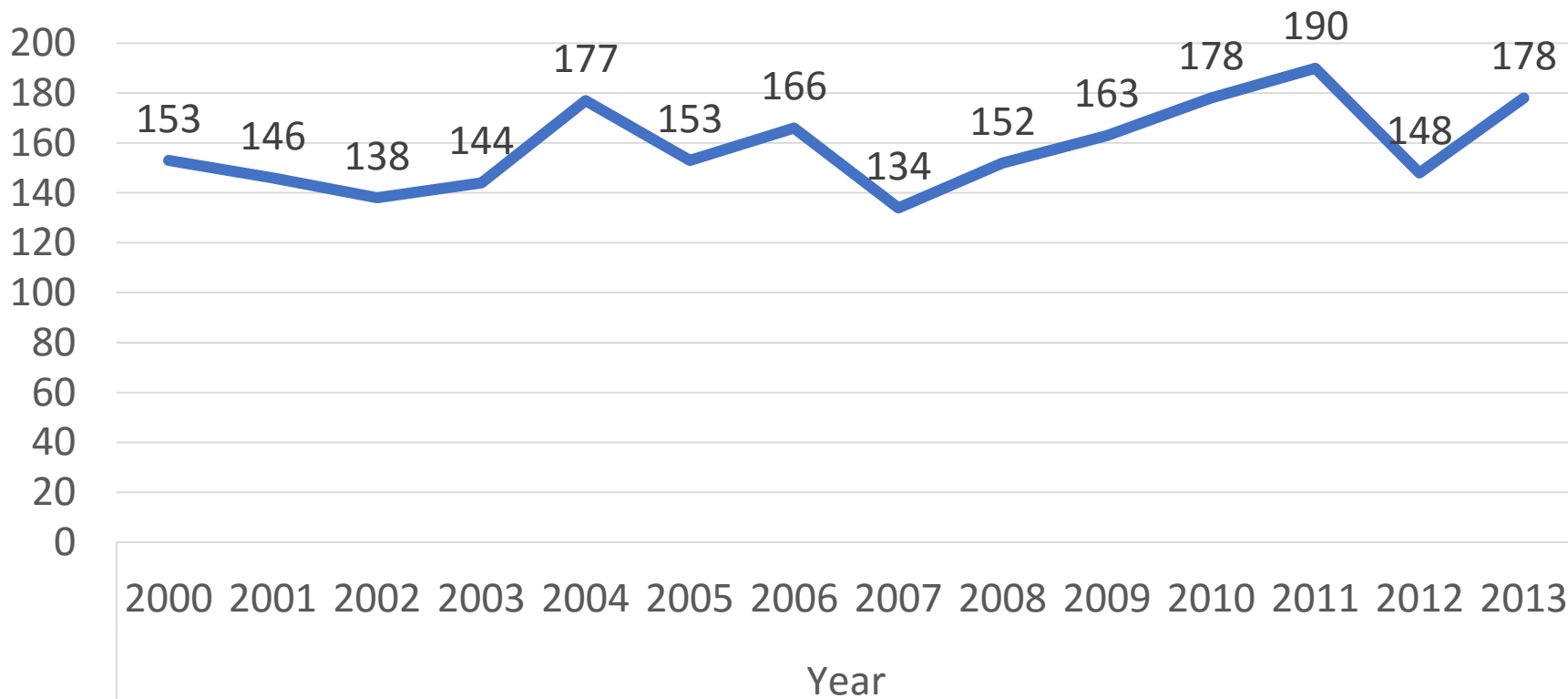


Adolescent suicidal behavior: National



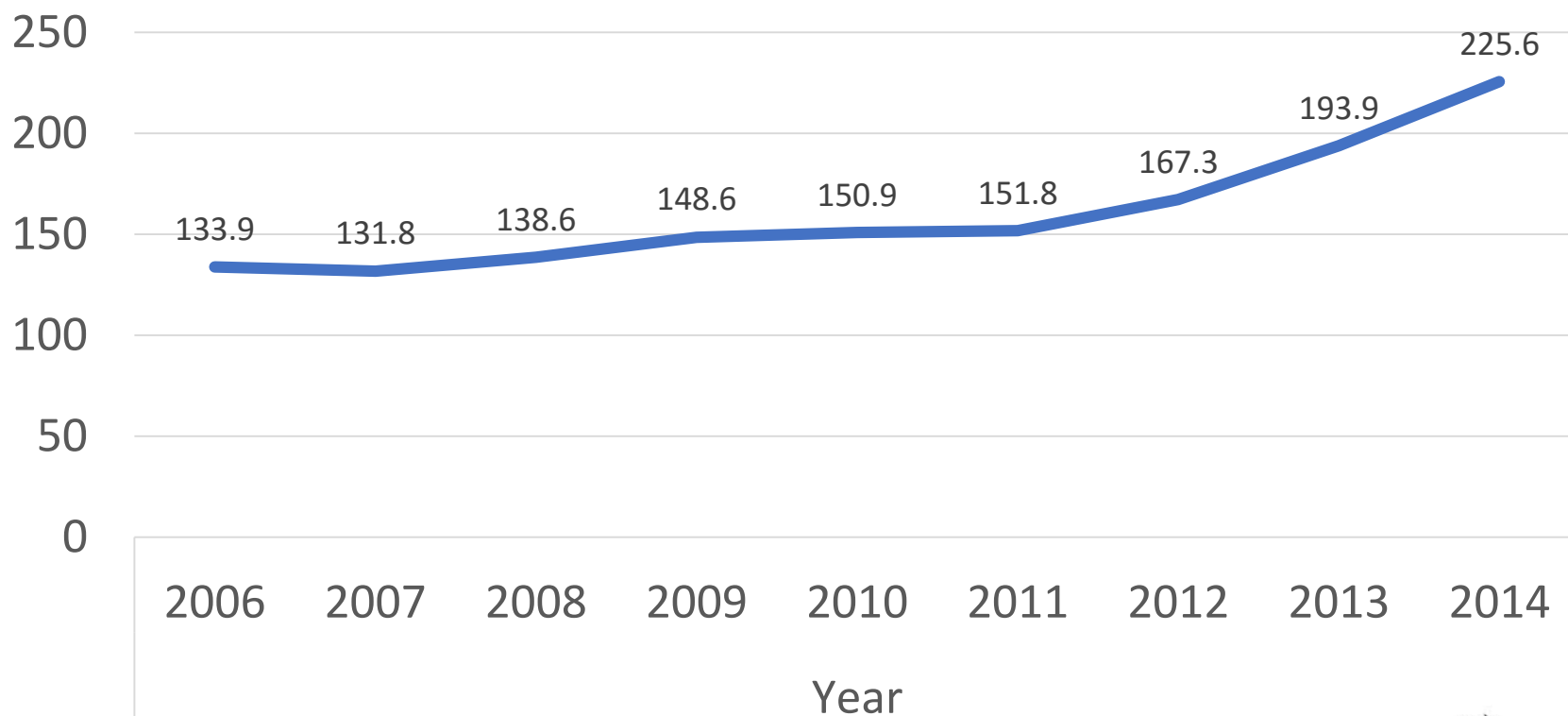
Adolescent suicidal behavior: CA

Adolescent suicide deaths (N), California



Adolescent suicidal behavior: CA

Adolescent ED visit rate for self-harm injuries,
per 100,000



Regionally

After three Clovis West student suicides, parents demand more action

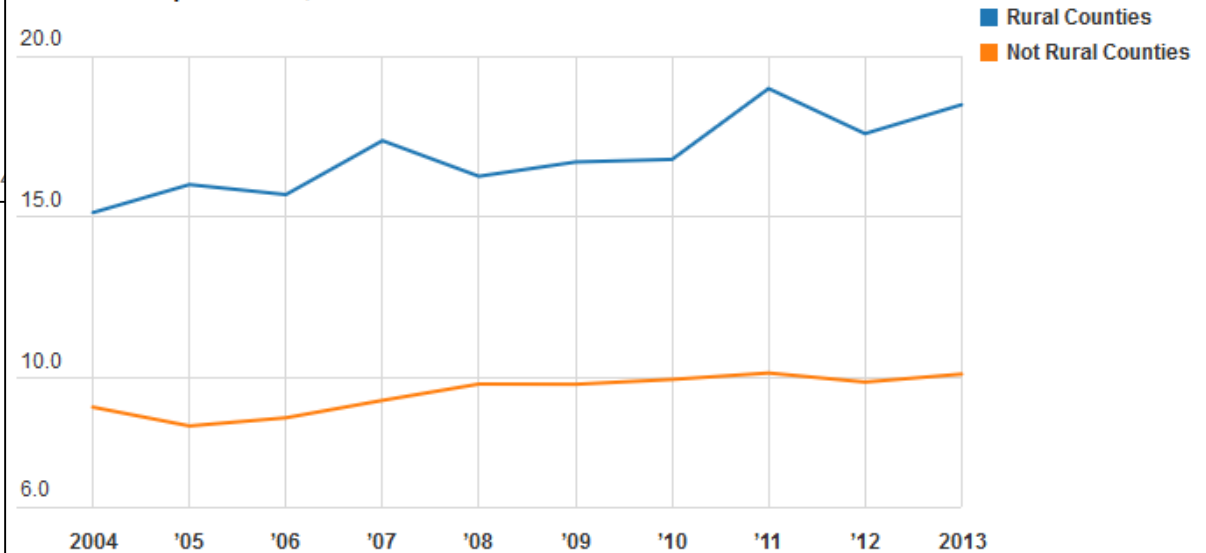


BY RORY APPLETON
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December 15, 2016 01:05 PM
Updated December 15, 2016 07:00 PM

Suicides per 100,000 California residents



Common risk factors for suicide

- Mental health problems
 - Depression, psychosis, substance abuse, prior suicidality, violent aggression, etc.
- Social isolation, poor coping skills
- Economic adversity
- Adverse childhood experiences
- Access to firearms and other means
- Family history of suicide
- Etc.



My research

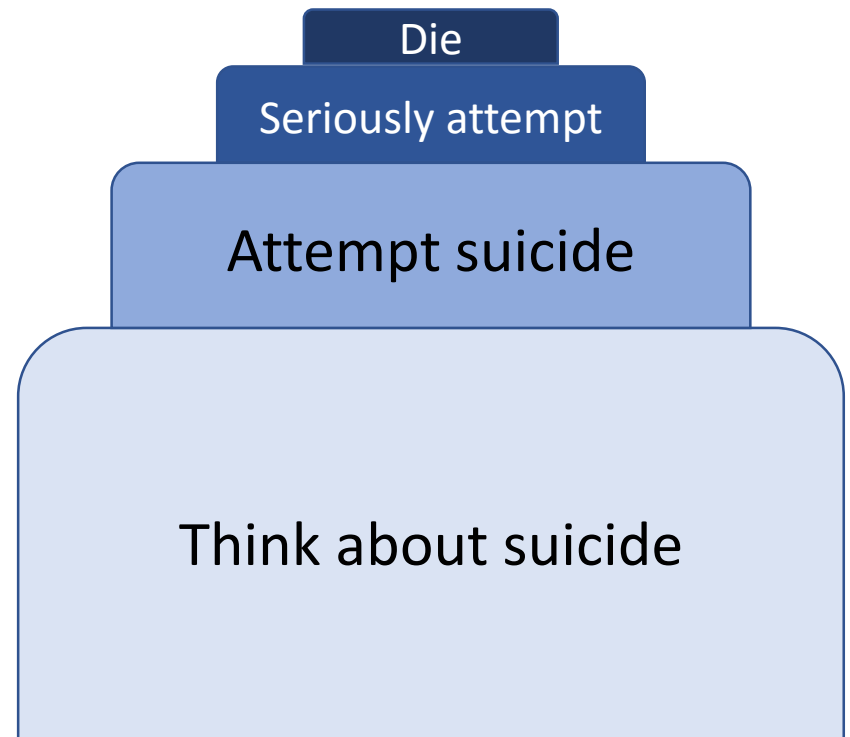
- Determinants (and outcomes) of adolescent nonfatal suicidal behavior
- Approaches:
 - Survey data
 - Emergency department data



Why nonfatal suicidal behavior?

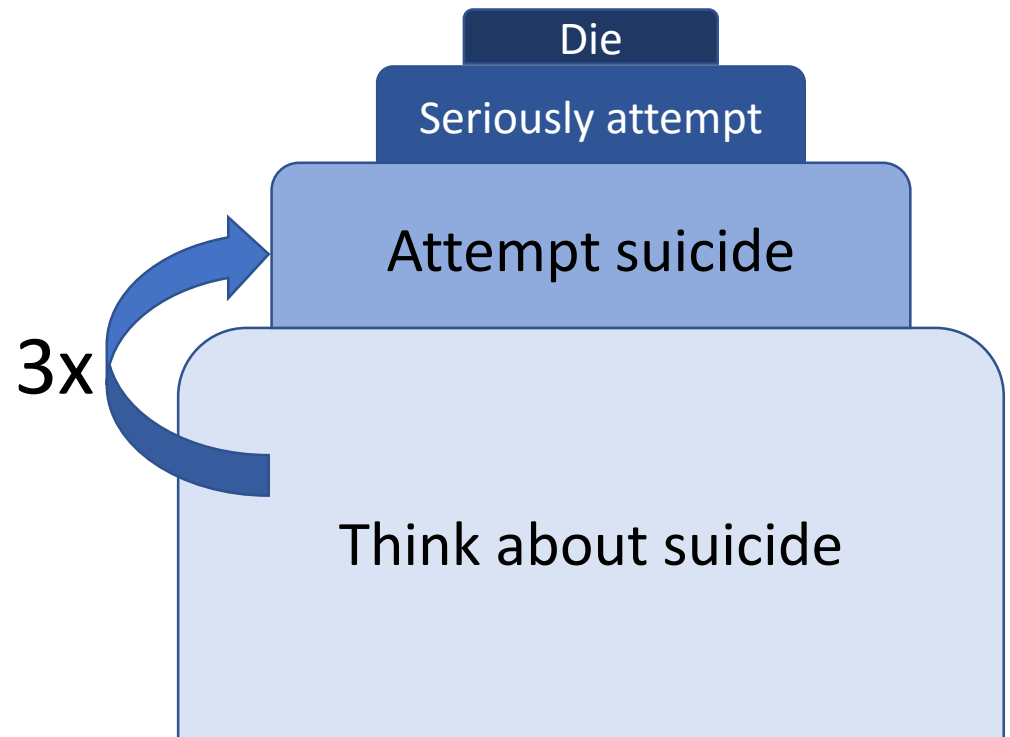
Nonfatal suicidal
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Most powerful
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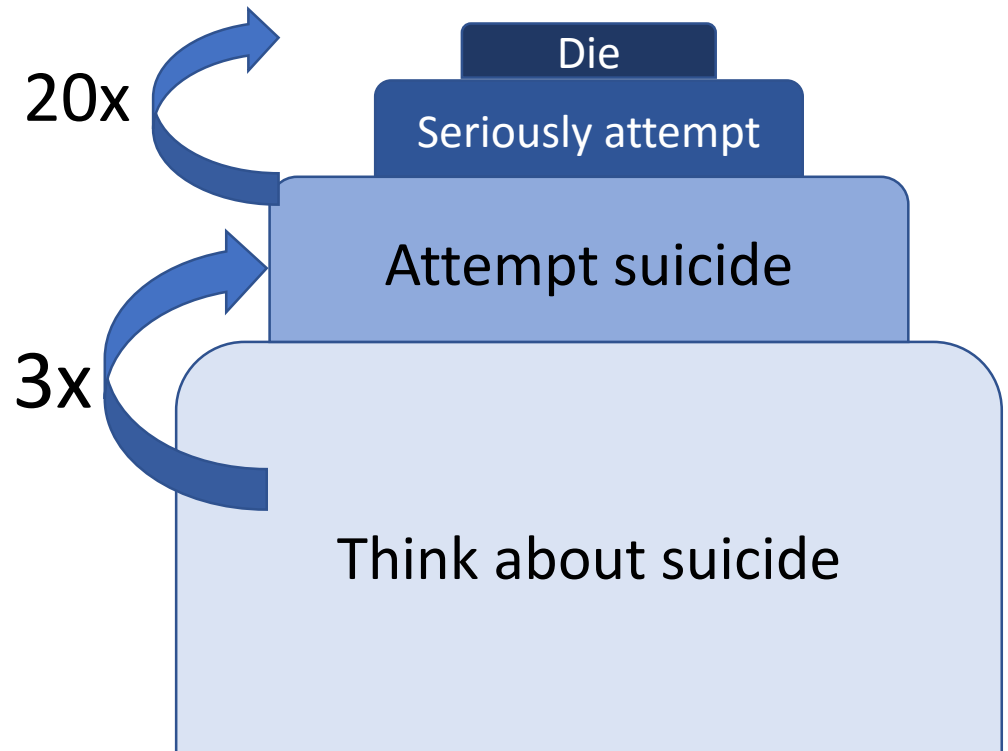
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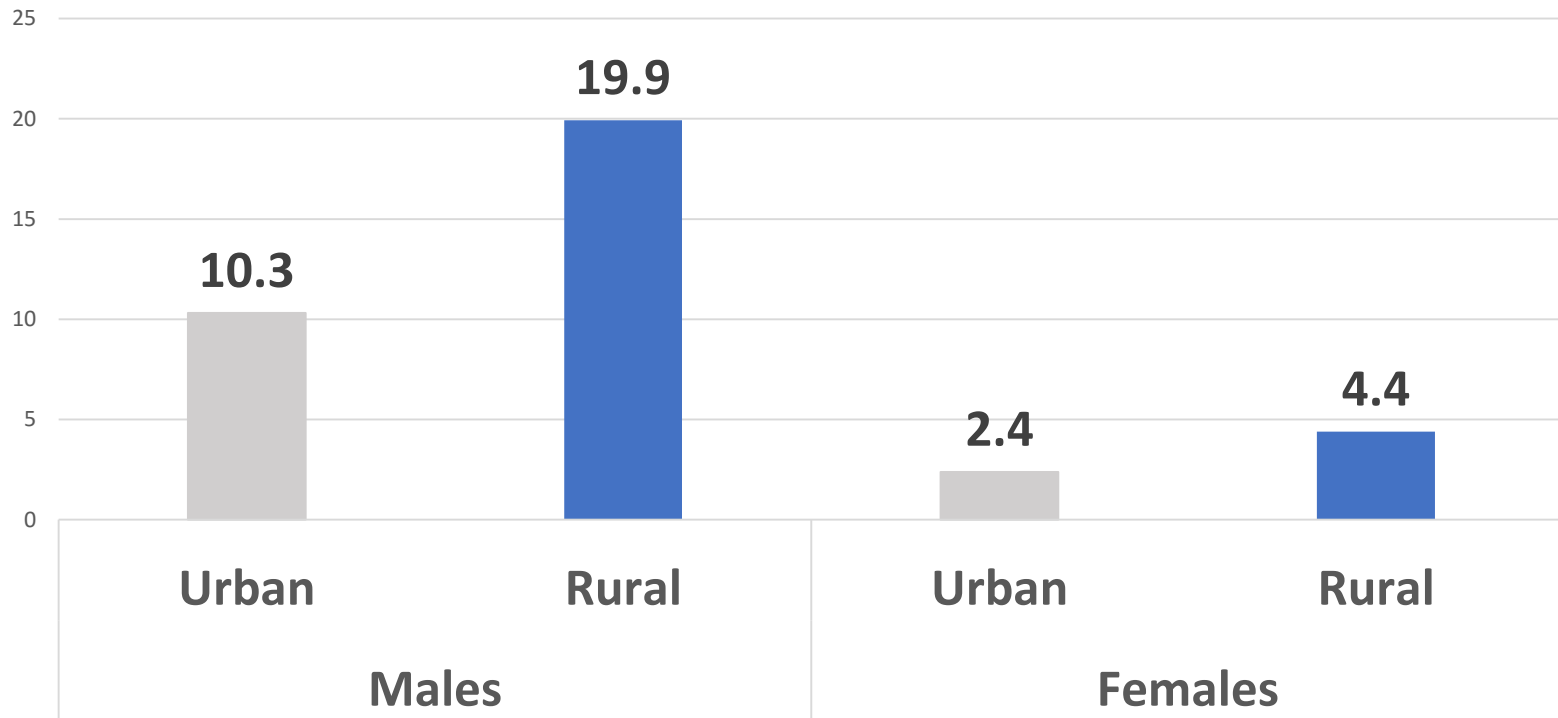


Rurality as risk factor for suicidal behavior

- Suicide among adolescents exhibits big geographic disparities
 - Rural youths almost 2x more likely than urban peers to commit suicide
 - Disparity is growing



Teen suicide rate (per 100,000) in 2010, U.S.



(Singh et al. 2013, Fontanella et al. 2015)

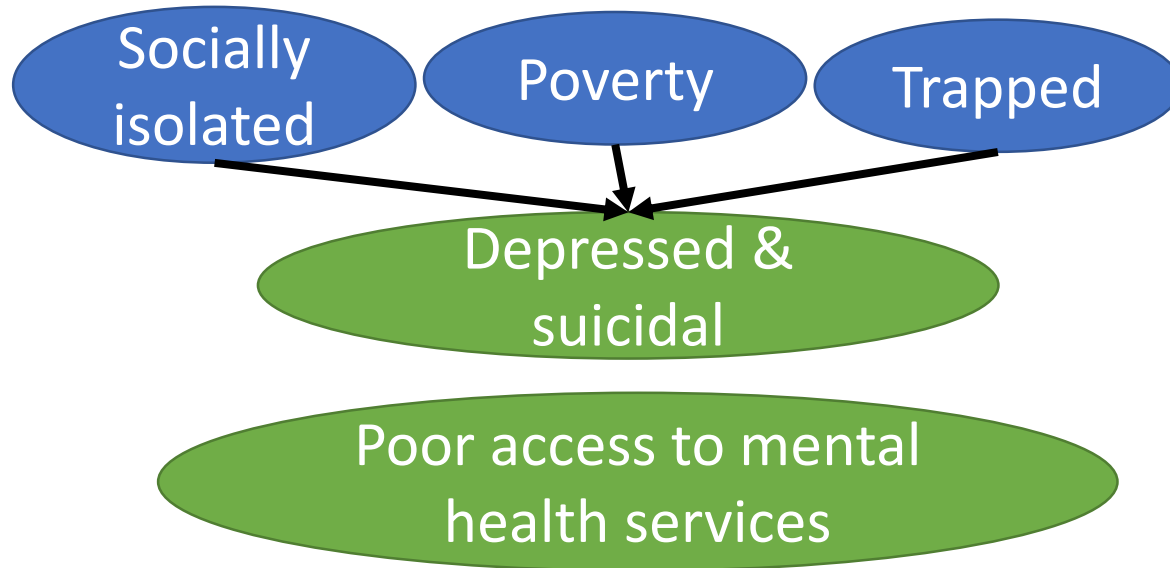
Why are rural youths at such high risk of suicide?

Knowing the answer to this could help us develop effective prevention strategies...



Plausible hypotheses

Maybe rural teens:



If true, then what should we expect to see among rural teens?

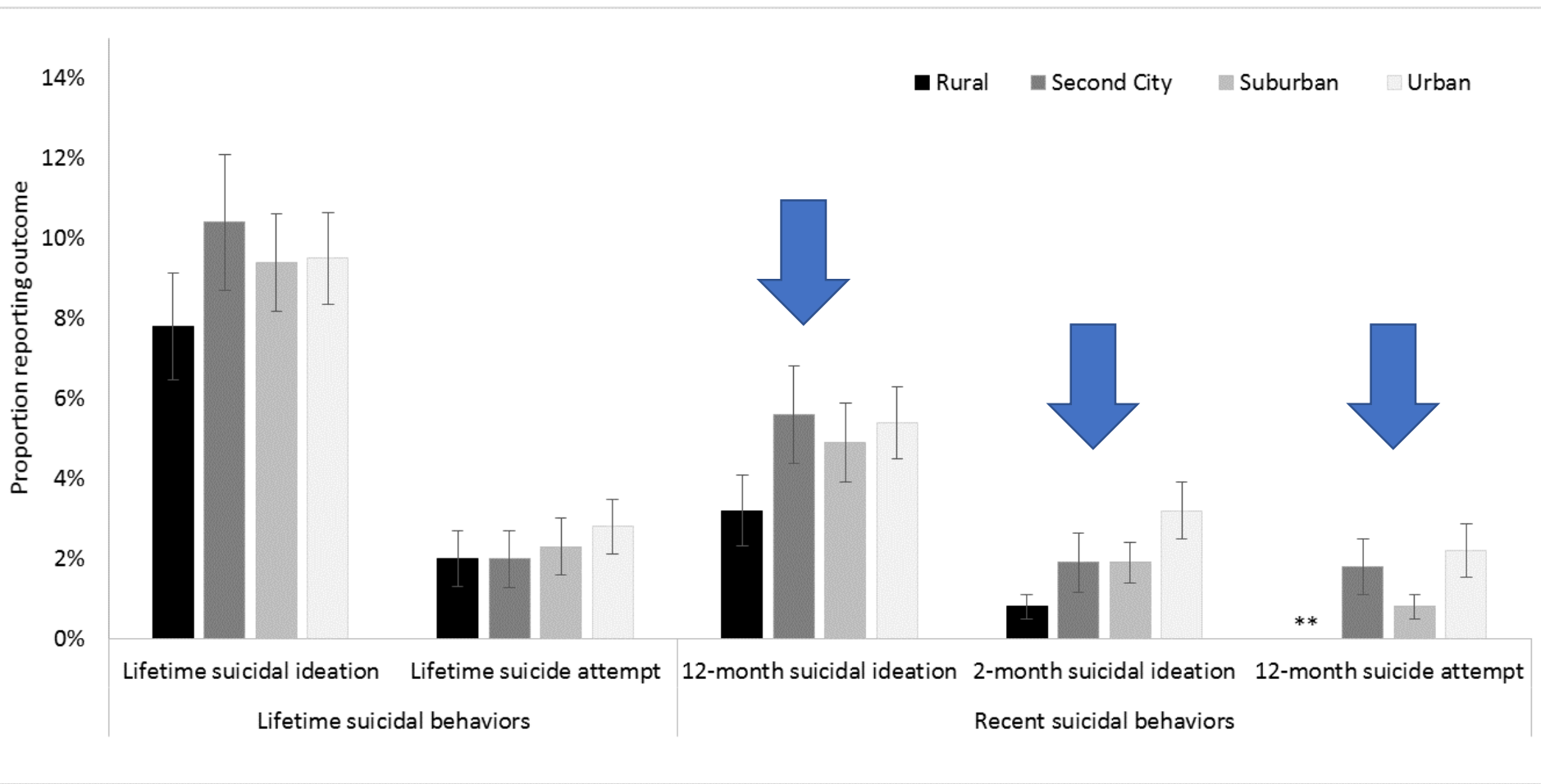
1. Higher rates of **nonfatal** suicidal behavior
2. Higher rates of **depression**
3. Lower rates of accessing mental health **care**



What do data from CA show?

- Used information on 4,600 adolescents surveyed by the California Health Interview Survey





What about receiving psychological care?

- Rural teens and urban teens (either suicidal or non-suicidal!) were **equally likely** to say they received psychological care
- Access apparently not a big issue



What do data show?

- Teens who live in rural areas are *less* likely to report suicidal behavior compared to those who live in urban areas
- Rural and urban teens *equally* likely to get psychological care
- Surprising, since we know they are **more** likely to commit suicide!



Implications

Why are rural teens more likely to die by suicide, given that they are actually *less* suicidal and have ok mental health care?

1. Maybe they are more likely to use firearms (and die) when they do attempt suicide
 - If so, education about gun safety and limiting teens' access to guns may help prevent suicide
2. They are farther from hospitals and emergency medical care
 - If so, then improving medical care in rural areas may help prevent suicide

Importance of the emergency department for suicide prevention

- 2012 *National Strategy for Suicide Prevention*
goal: Prioritize the ED as a setting for adolescent suicide research, intervention, & prevention efforts.



My current work

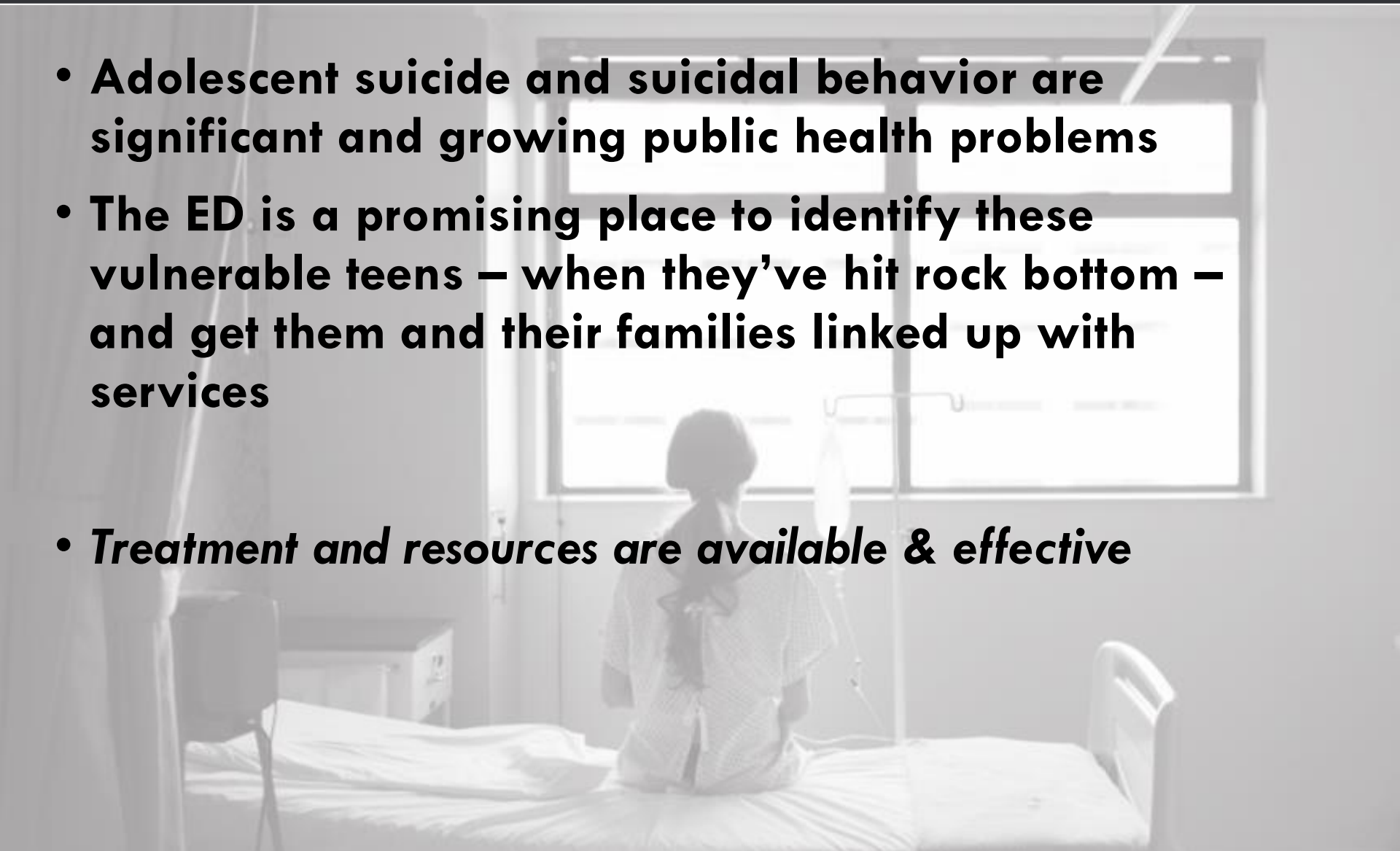
- **Q1:** Can we use ED data to differentiate adolescents who go on to attempt suicide vs. those who don't?
- **Q2:** What factors predict *repeated* suicide attempt among adolescents?
- **Q3:** What is the risk of subsequent health problems, healthcare utilization, and high healthcare costs among adolescent suicide attempters?

Ultimate goal? Use this information to help others design intervention efforts.



Important takeaways

- **Adolescent suicide and suicidal behavior are significant and growing public health problems**
- **The ED is a promising place to identify these vulnerable teens – when they've hit rock bottom – and get them and their families linked up with services**
- ***Treatment and resources are available & effective***



Treatment implications

- **Movement for universal screening in emergency departments (and maybe primary care too)**
- **Put suicide screening questions in the hands of everyone**



Thank you

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Resources

- Suicide is Preventable campaign (CA):
 - <http://www.suicideispreventable.org/>
- Central Valley Suicide Prevention Hotline:
 - 1-888-506-5991
- Crisis TextLine: Free, 24/7 support to people in crisis
 - <https://www.crisistextline.org/>
 - Based on text messages – good for teens
- National Suicide Prevention Lifeline:
 - <https://suicidepreventionlifeline.org/>
- Columbia Lighthouse Project
 - <http://cssrs.columbia.edu/>

