

CDC PUBLIC HEALTH GRAND ROUNDS

Preventing Suicide: a Comprehensive Public Health Approach



September 15, 2015



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Suicide: An Urgent Public Health Problem



Alex E. Crosby, MD, MPH

Chief, Surveillance Branch

Division of Violence Prevention

National Center for Injury Prevention and Control



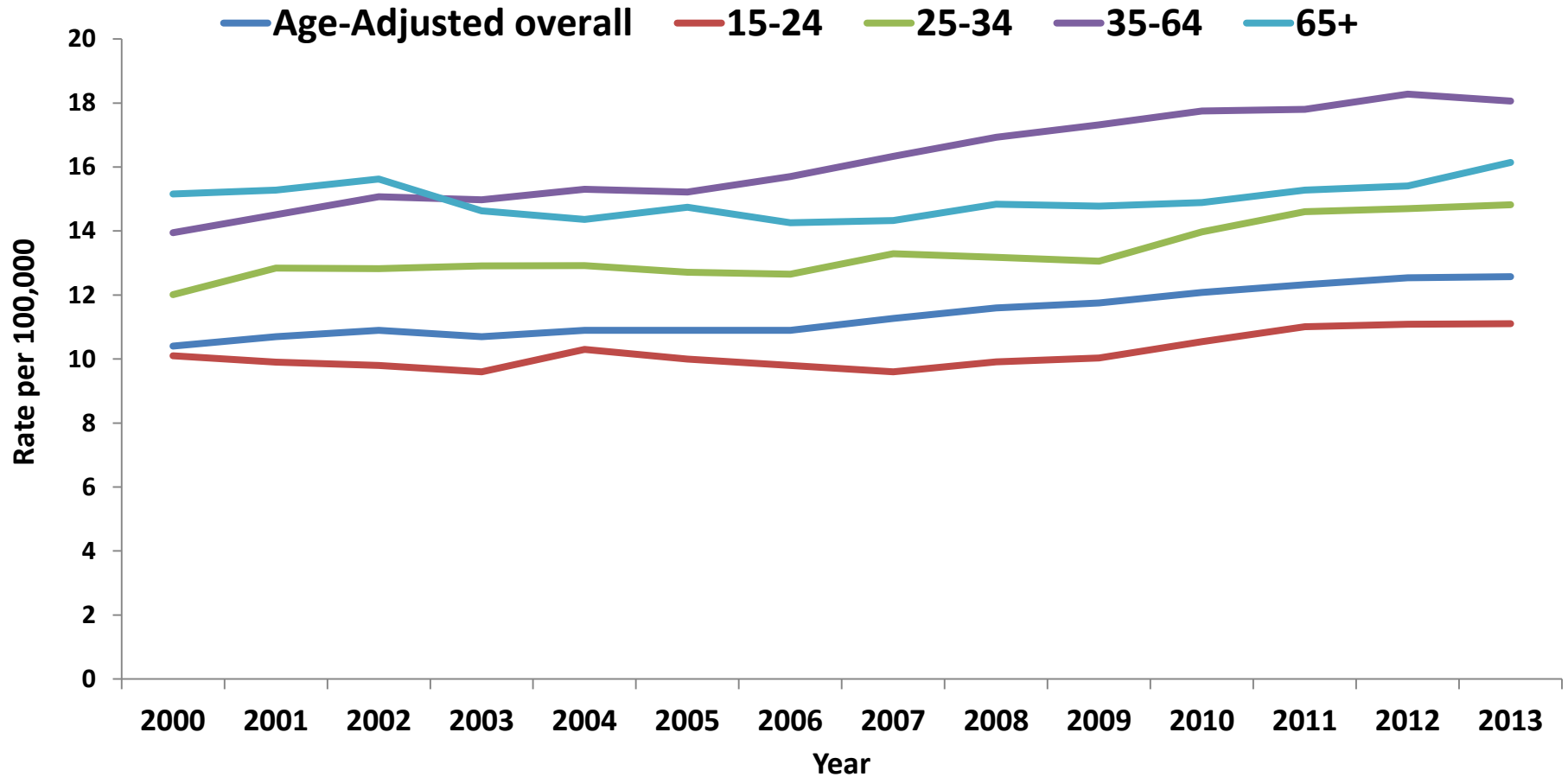
U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Leading Causes of Death United States, 2013

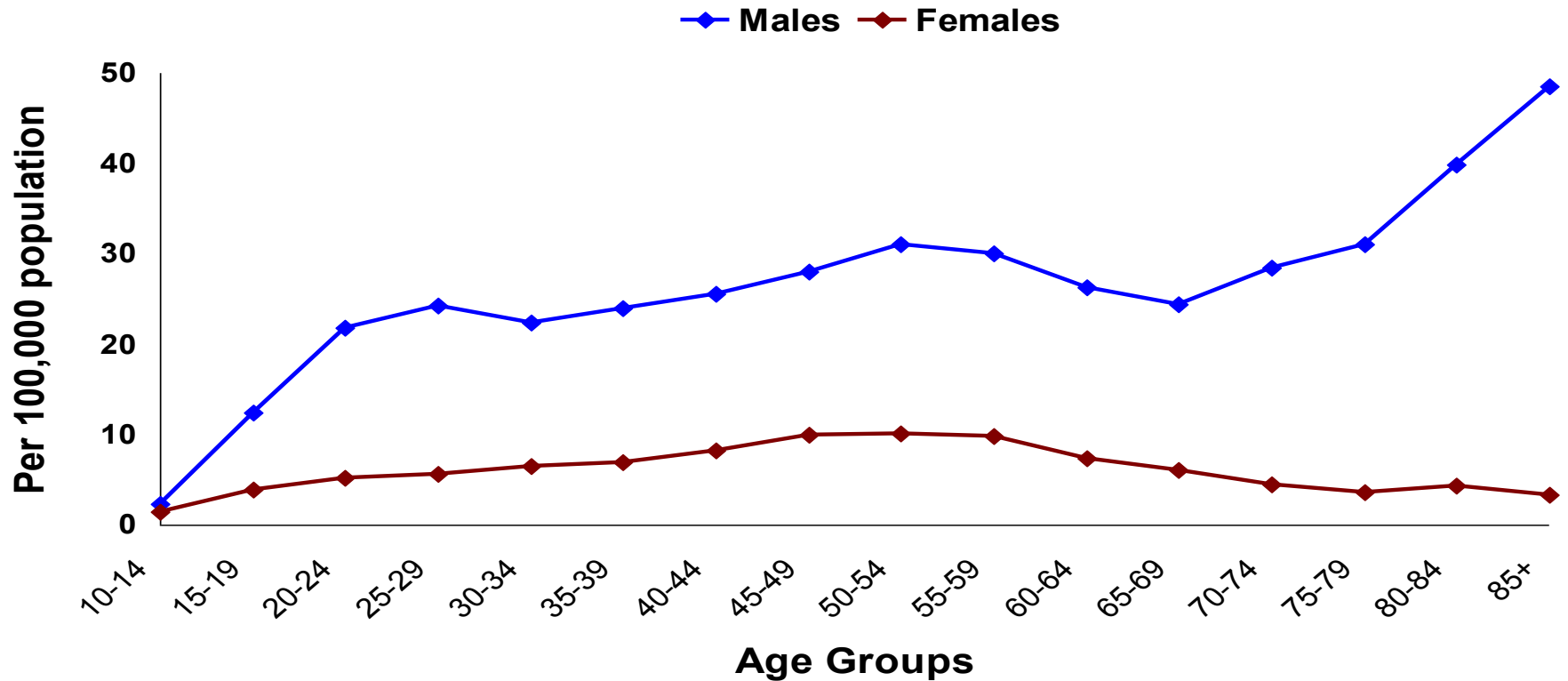
Rank	Cause	Deaths
1	Heart Disease	611,105
2	Malignant Neoplasms	584,881
3	Chronic Lower Respiratory Disease	149,205
4	Unintentional Injuries	130,557
5	Cerebrovascular Disease	128,978
6	Alzheimer's Disease	84,767
7	Diabetes Mellitus	75,578
8	Influenza and Pneumonia	56,979
9	Nephritis	47,112
10	Suicide	41,149

**Suicides resulted in 804,195 years
of potential life lost before age 65**

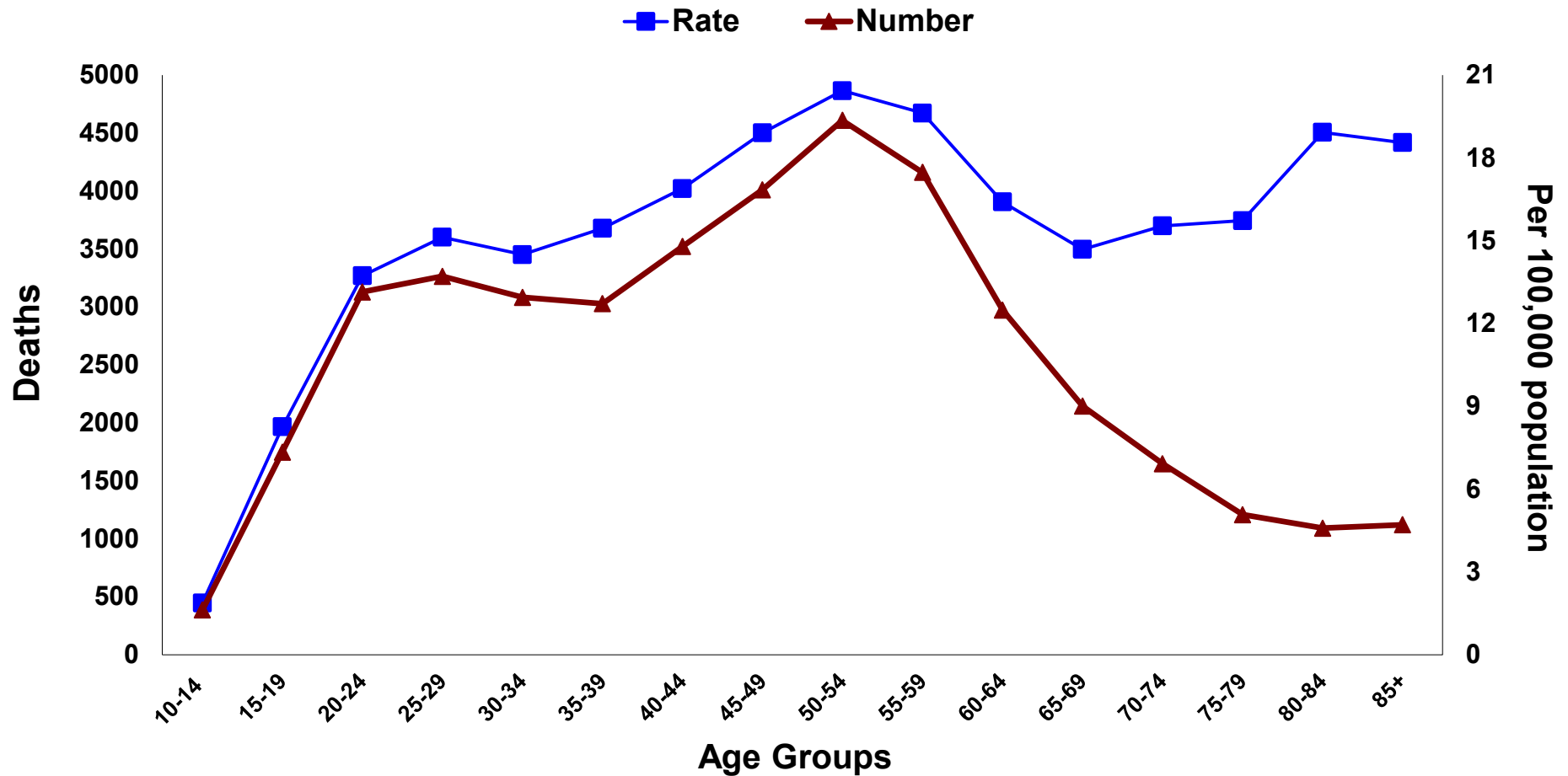
Suicide Rates United States, 2000–2013



Suicide Rates by Age and Sex United States, 2013



Suicides and Suicide Rates United States, 2013



Middle-Aged Adults and Youth

❑ Middle-aged adults (35 – 64 years)

- Fifth leading cause of death
- Largest proportion of suicides (54%)
- Suicide rate increased 29% since 2000

❑ Adolescents and young adults (10 – 24 years)

- Second leading cause of death
- Significant increase in suicide rates
- American Indian/Alaska Native suicide rate (23 per 100,000) is 2.8 times higher than the national rate (8.2 per 100,000)

Veterans and Military

❑ Veterans

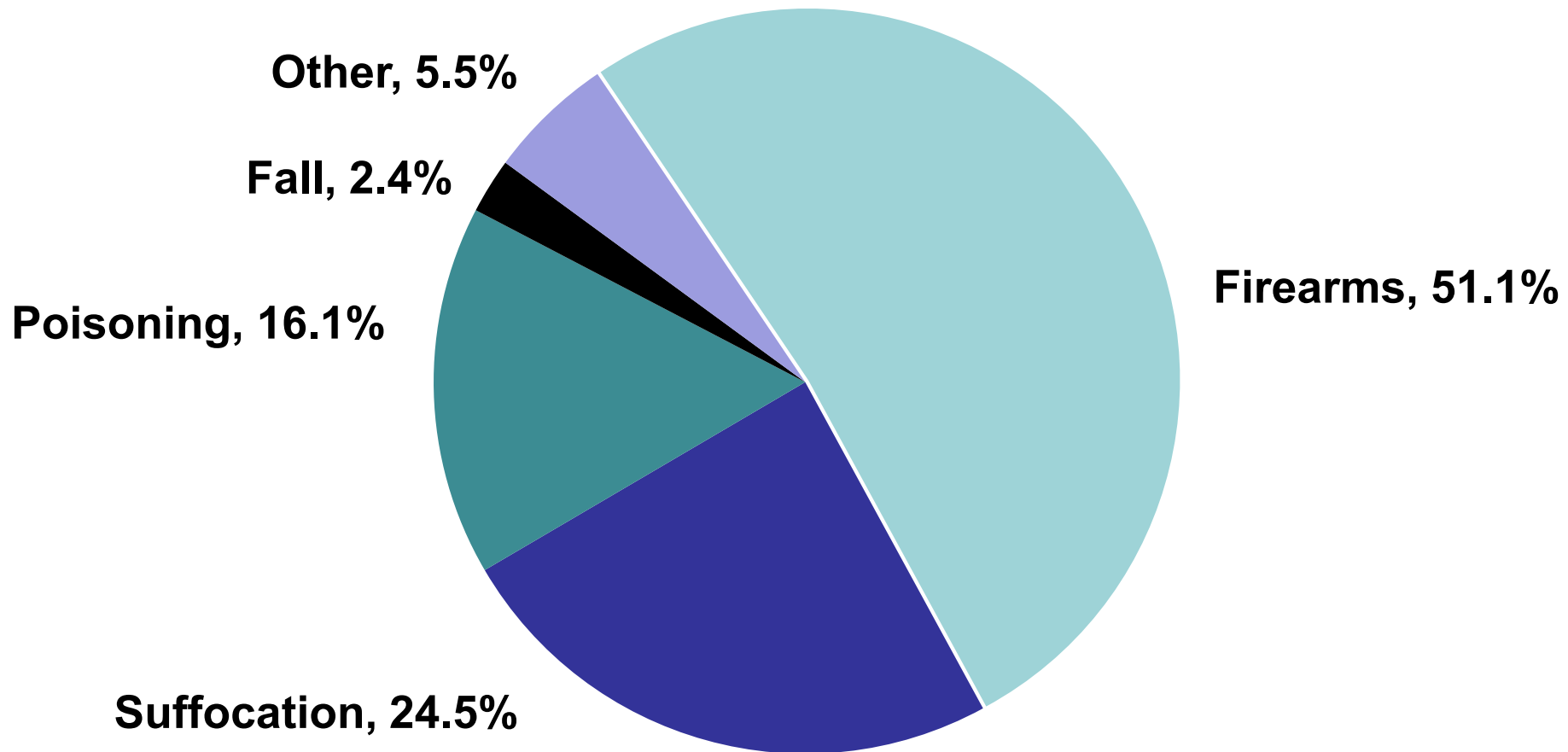
- Suicide rate higher than civilian population

❑ Active duty US Army

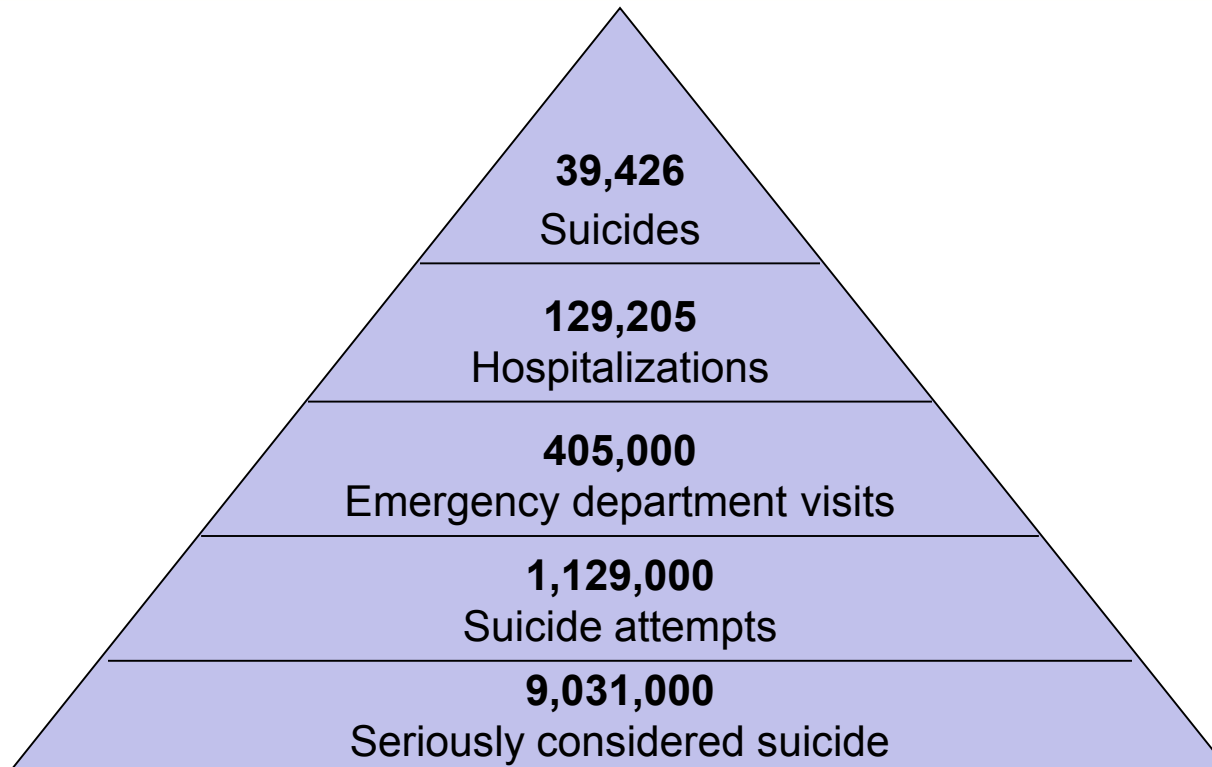
- 2008: age- and sex- adjusted rates exceeded rates among civilian population
- Rates continue to increase



Suicide Mechanism United States, 2013



Adults Affected by Suicidal Thoughts and Behavior United States, 2012



**For every one suicide there were over
229 who seriously considered suicide**

www.cdc.gov/injury/wisqars/leading_causes_death.html

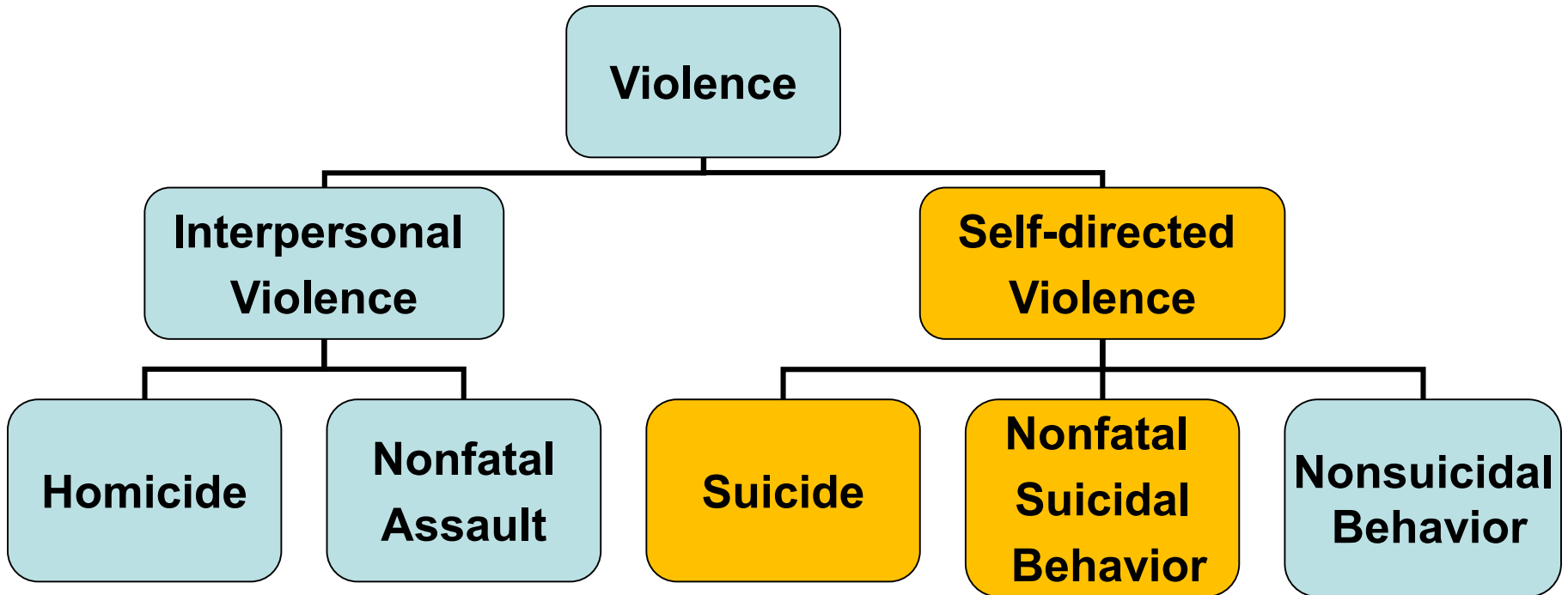
Agency for Healthcare Research and Quality Healthcare Cost and Utilization Project - Nationwide Inpatient Sample (HCUP-NIS)

CDC National Electronic Injury Surveillance System-All Injury Program

SAMHSA National Survey on Drug Use and Health

Suicide is a Form of Violence

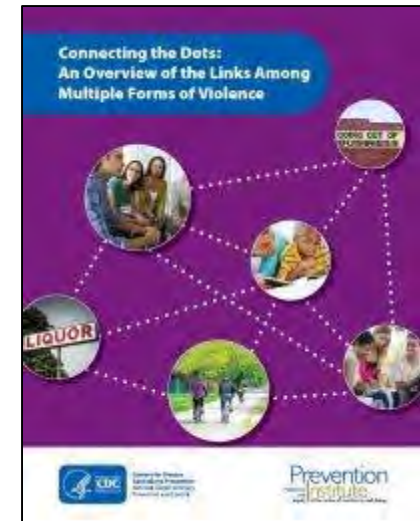
- ❑ Historically, addressed primarily as mental health issue
- ❑ Multifaceted problem needing comprehensive solutions



Division of Violence Prevention Strategic Direction

❑ Interconnection among multiple forms of violence

- Suicide
- Child abuse and neglect
- Intimate partner violence
- Sexual violence
- Youth violence
- Elder abuse and neglect



❑ Connecting the Dots

- Many of forms of violence share common risk factors
- Preventing violence and other adverse life experiences can reduce the risk for suicide

CDC Role in Suicide Prevention

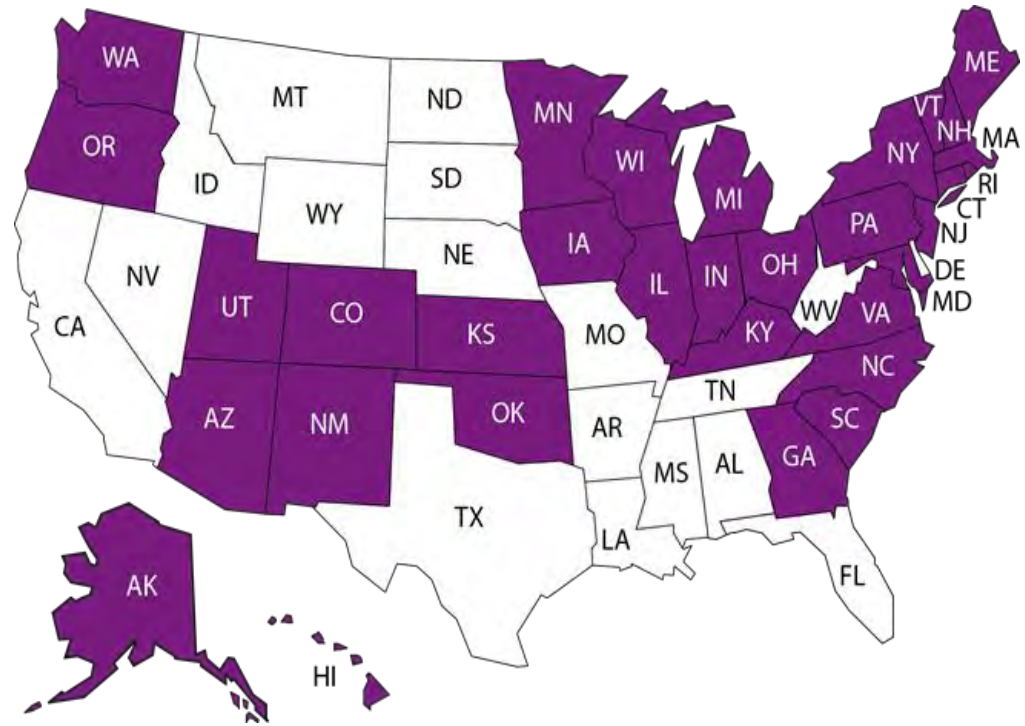
□ Emphasizes:

- Population approach
- Primary prevention
- Surveillance
- Rigorous science base
 - Studies of risk and protective factors
 - Development and evaluation of prevention strategies

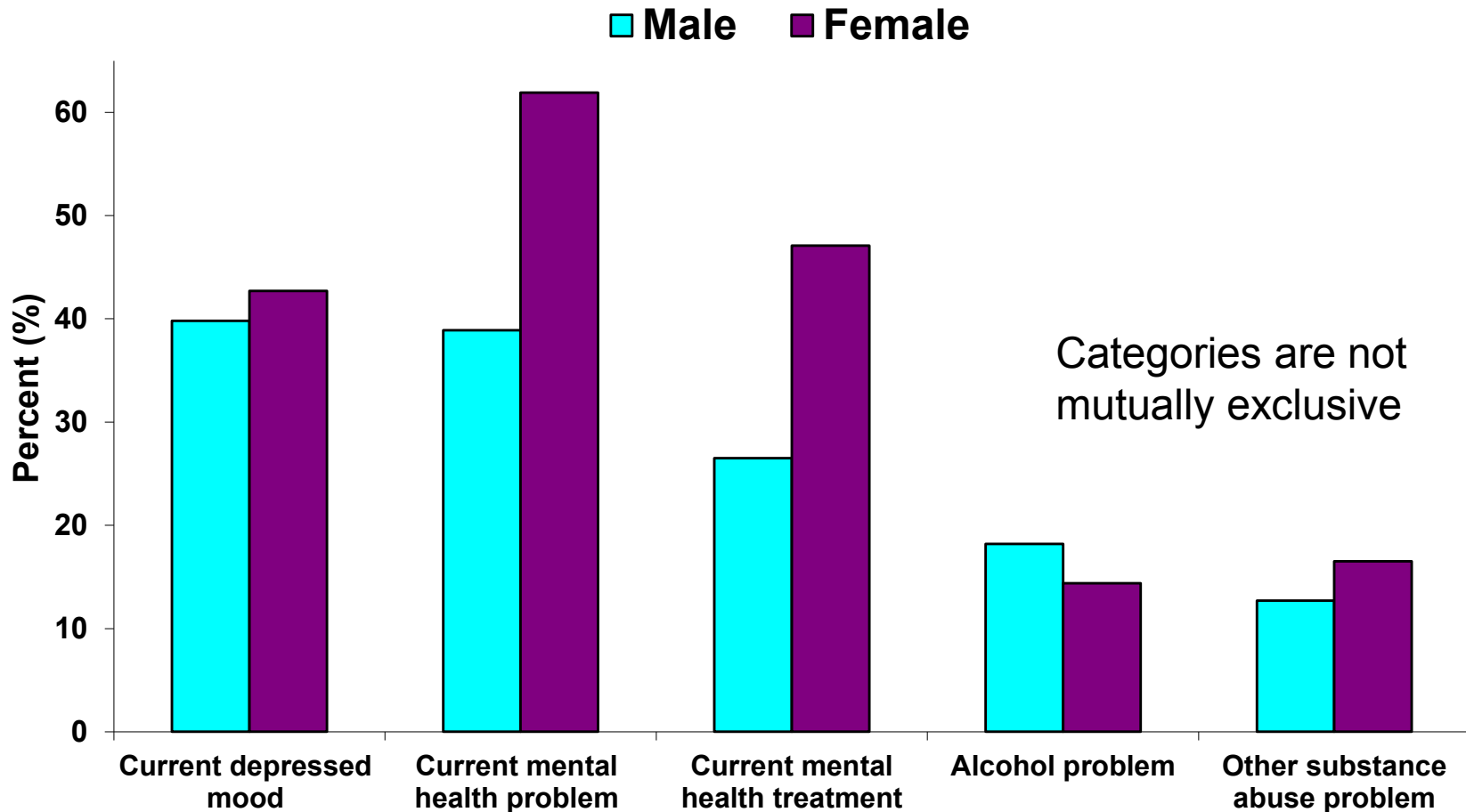


National Violent Death Reporting System (NVDRS)

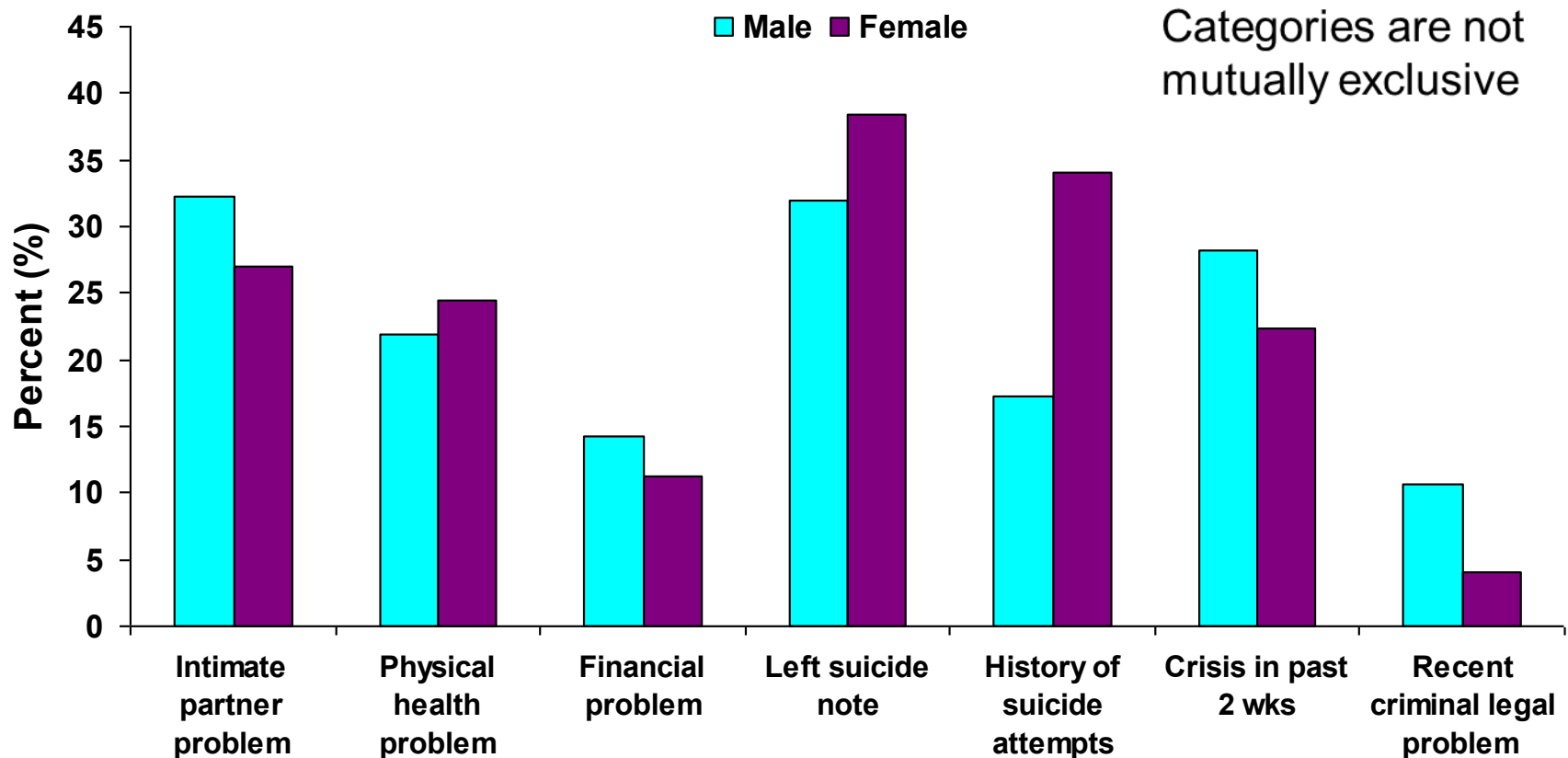
- ❑ **Began in 2002**
- ❑ **Covers 32 states accounting for 55% of US violent deaths**
- ❑ **Integrates data from diverse sources**
 - Death certificates
 - Coroner/medical examiner reports
 - Law enforcement
 - Crime laboratories



Health and Behavior Information for Suicide Decedents by Sex – 16 States, 2010



Health and Behavior Information for Suicide Decedents by Sex – 16 States, 2010



State-level Suicide Prevention Efforts Informed by NVDRS Data

❑ **South Carolina: youth suicide**

- Identify at-risk group and focus prevention efforts
- Update state suicide prevention plan
- Secure SAMHSA support to implement prevention programs

❑ **Oregon: older adult suicide (≥ 65 years)**

- Almost 50% of men and 60% of women who died by suicide had a depressed mood before death but only 14% of men and 29% of women with depression were in treatment
- Data on circumstances surrounding suicide among older adults assisted in integration of suicide prevention efforts into primary care practice, starting in 2006
- Reductions in suicide among men aged ≥ 65 years (11% between 2007 and 2013) encouraging but require evaluation

NVDRS: National Violent Death Reporting System

SAMHSA: Substance Abuse and Mental Health Services Administration

Stories from the Frontlines of Violent Death Surveillance. (2013). Atlanta GA: Safe States Alliance.

c.ymcdn.com/sites/safestates.site-ym.com/resource/resmgr/NVDRS/NVDRS_Stories_complete_repor.pdf

CDC Collaborations Focused on High-risk Groups

❑ Preventing suicide by enhancing connectedness

- University of Michigan: Linking To Enhance Teens Connectedness (LET's CONNECT)
- University of Rochester: The Senior Connection

❑ Evaluating innovative and promising strategies to prevent suicide among middle-aged men

- University of California at Davis: Multimedia Activation to Prevent Suicide for Men, coupled with telephone follow-up care
- University of Maryland-Baltimore: Screening for Mental Health and Man Therapy

Division of Violence Prevention Outreach

- ❑ **September is National Suicide Prevention Month**
- ❑ **World Suicide Prevention Day is September 10**
- ❑ **#VetoViolence Social Media Project**
 - 1 Photo & 6 Words
 - Instagram, Facebook, Twitter
- ❑ **Ask the Experts**
 - Facebook Forum
 - September 21 – 25, 2015

How do you help prevent suicide?

Spread the word — suicide is preventable.

Share how with 1 photo & 6 words.
#VetoViolence
Get details & ideas

Suicide Prevention Roles and Needs

- ❑ **Everyone has a role in preventing suicide**
 - Decrease stigma, talk about suicide
 - Know the warning signs
 - Give support, act to prevent it

- ❑ **Need exists for public health role in preventing suicidal behavior**
 - Improved surveillance
 - Expanded research
 - Focus on prevention and interconnectedness of adverse health outcomes, especially multiple forms of violence



Implementing Promising Suicide Prevention Approaches While Enhancing the Evidence Base



Eric D. Caine, MD

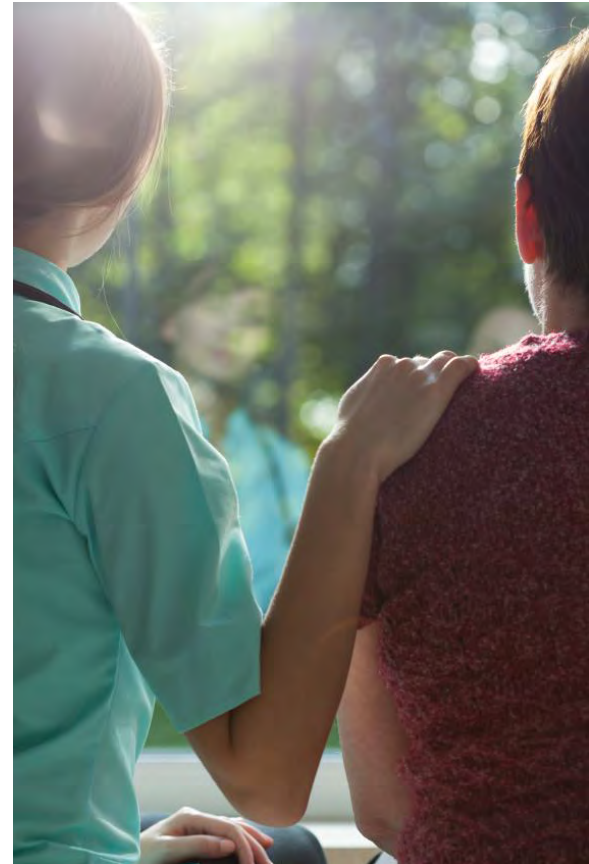
*John Romano Professor and Chair, Department of Psychiatry
Director, Injury Control Research Center for Suicide Prevention
University of Rochester Medical Center*



Suicide Prevention: The Public Health Rationale

- ❑ **Population approach and primary prevention are critical**
 - People at risk often do not seek help
 - First attempts can be fatal
 - Reach beyond clinic and hospital walls and into communities

- ❑ **Use data to understand and address common risks for premature deaths**



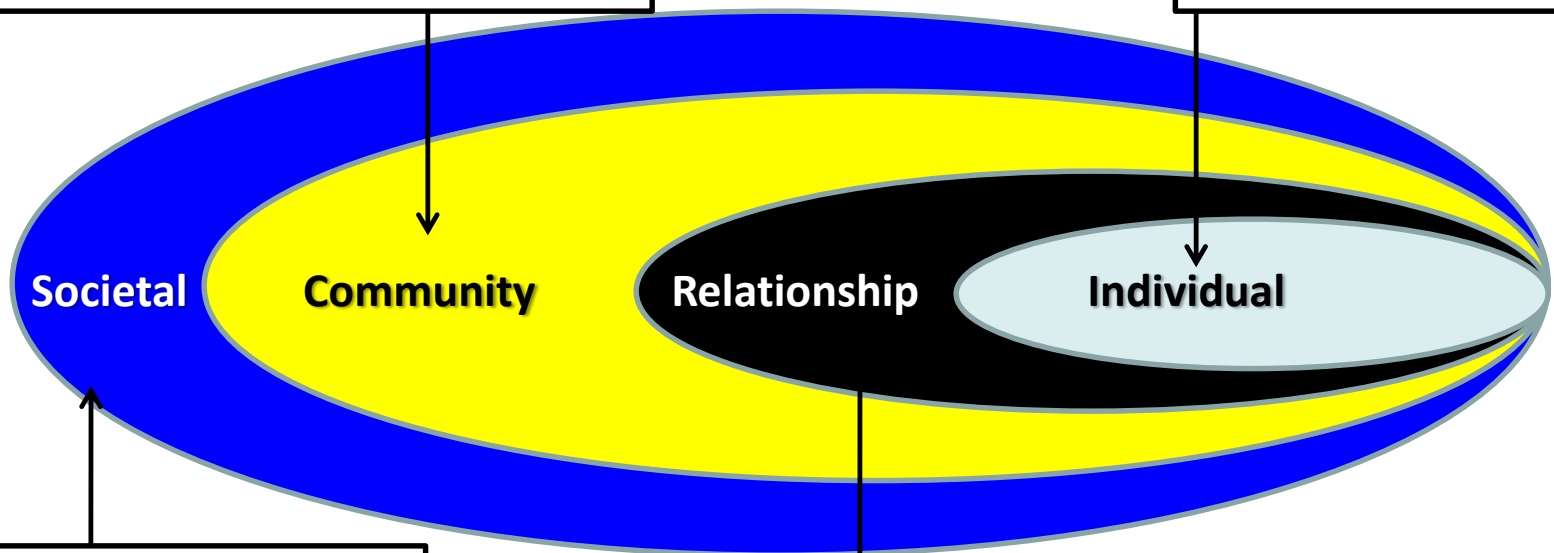
Suicide Risks Beyond Mental Health

- ❑ **Alcohol, substance abuse, and dependence**
- ❑ **Financial problems**
- ❑ **Life stressors and relationship problems**
 - Recent crisis (e.g., romantic or marital break-up)
 - Job problems
 - Intimate partner violence
- ❑ **Early childhood adversities (e.g., abuse, neglect)**
- ❑ **Criminal or legal problems**
- ❑ **Medical or physical health problems (older adults)**
- ❑ **Depression, other mental health conditions common**
 - *But common conditions cannot predict uncommon events*

Broad Risks, Broad Prevention Need

- Community crime and violence
- Few education and employment opportunities
- Residential instability
- Low community cohesion
- Limited support services

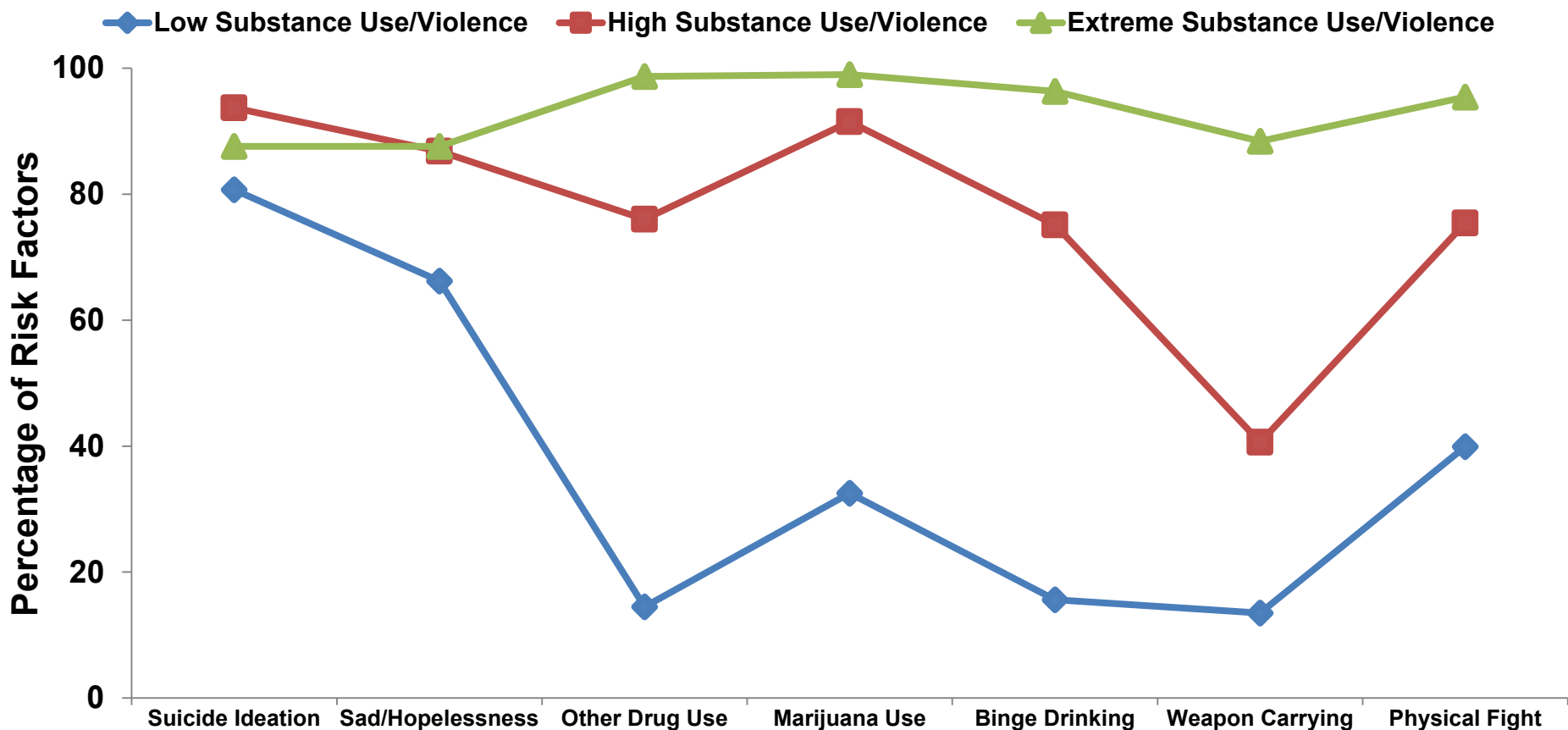
- Mental health
- Alcohol, substance abuse
- Victim of violence
- Access to lethal means



- Poverty
- Stigma about distress and help-seeking
- Cultural norms that support violence
- Discrimination and health inequalities

- Poor parenting
- Family and intimate partner violence
- Family history of suicide

Youth Making Suicide Attempts Requiring Medical Attention



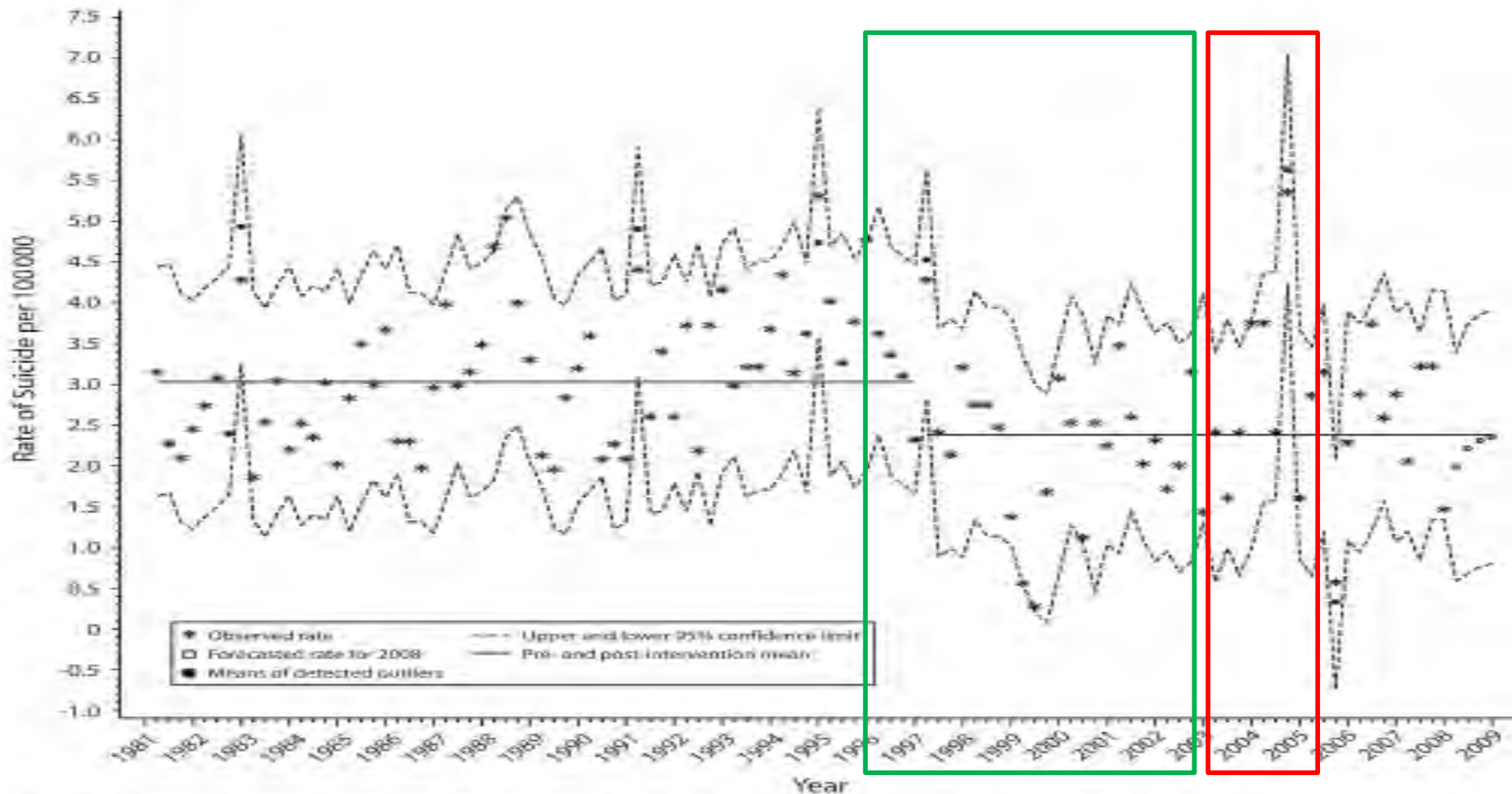
U.S. Air Force Suicide Prevention Program

- ❑ **Public health-community approach: “Air Force Family”**
 - Broad involvement of key partners and consistent leadership
- ❑ **Eleven initiatives grouped in four areas**
 - Increase awareness and knowledge
 - Increase early help seeking
 - Change social norms
 - Change selected policies



Program Results	Relative Risk Reduction
Suicide	33%
Homicide	51%
Severe Family Violence	54%
Unintentional Death	18%

Air Force Suicide Prevention Program – Quarterly Suicide Rates



Note: The US Air Force Suicide Prevention Program was implemented in 1997.

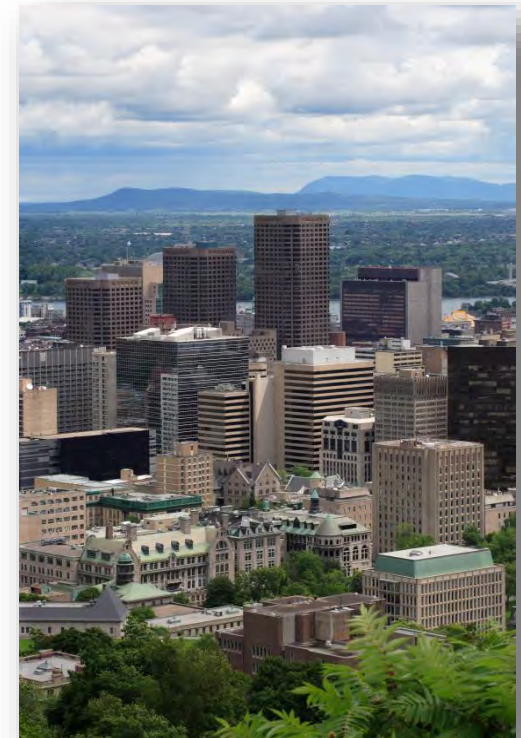
Together for Life

Montreal Police Suicide Prevention Program

❑ Multicomponent suicide prevention program

- Publicity campaign
- Personnel and supervisor training
- Prevention resources

Program Results	Suicide Rate Before Program (1986 – 1996)	Suicide Rate After Program (1997 – 2008)
Montreal police	30.5	6.4
All other Quebec police	26	29
	<i>Rates per 100,000</i>	



Good Behavior Game

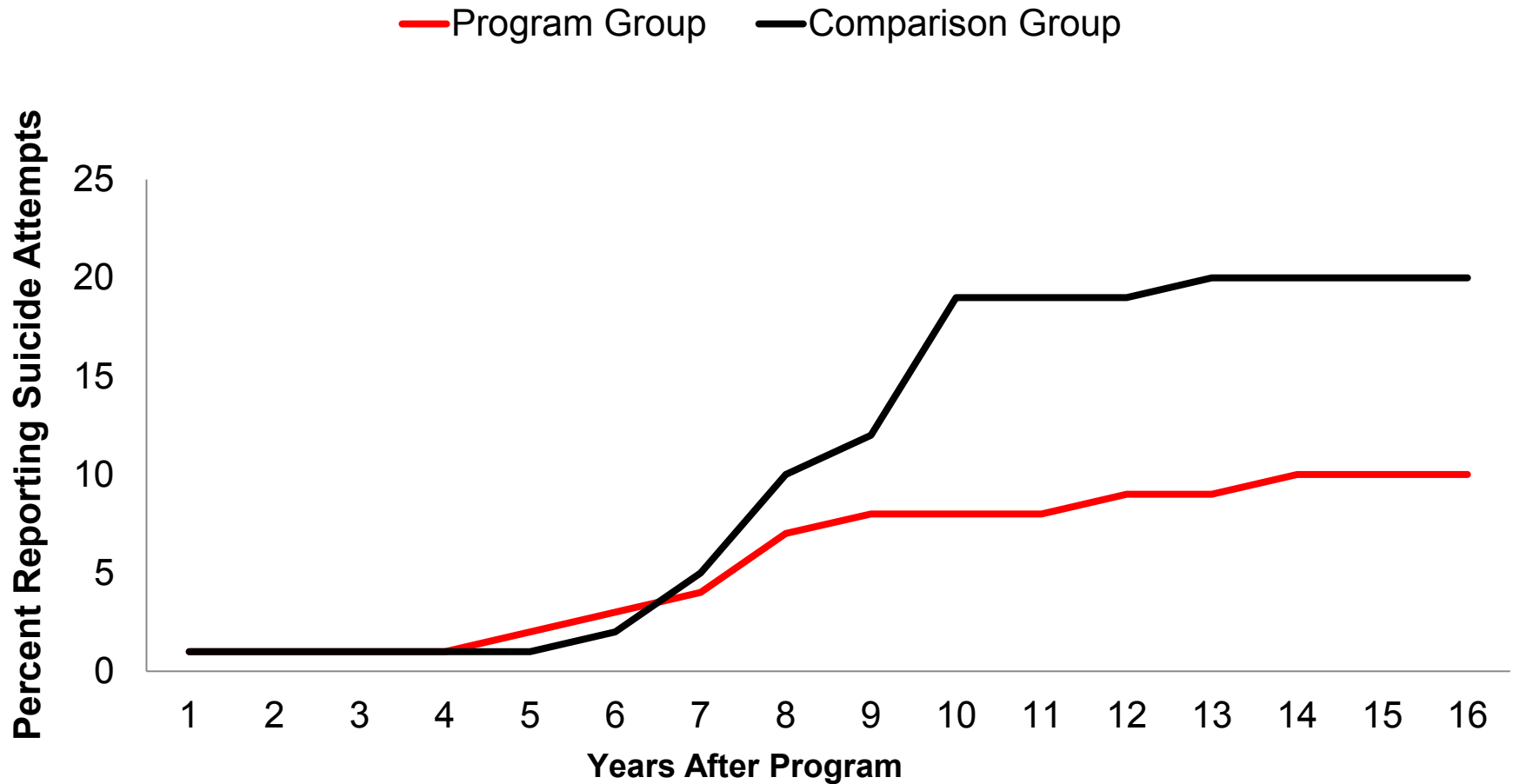
- ❑ **Elementary school classroom-based behavior management strategy (first and second grade)**
- ❑ **4 core components**
 - Classroom rules
 - Team membership
 - Self- and team-behavior monitoring
 - Positive reinforcement
- ❑ **Significant long-term reductions in antisocial behavior, smoking, drug and alcohol use**



- Part of standard curriculum throughout school year
- 3 times per week for 10 minutes
- Training, resources available for teachers

Good Behavior Game

Suicide Attempts After Program for Females



Wilcox HC et al. Drug and Alcohol Dependence 2008; 95(Suppl 1),S60-S73.

Sources of Strength

- ❑ **School-based primary prevention program that reaches all students regardless of risk**
- ❑ **Program activities**
 - Peer leader training
 - Adult advisors and mentoring
 - Messaging activities to change peer group norms and improve coping skills
- ❑ **Program impacts**
 - Peer leaders' connectedness and school engagement
 - Student perceptions of support and acceptability of help seeking



Injury Control Research Center for Suicide Prevention (ICRC-S)

❑ **Center-without-walls**

- Generates diverse collaborations
- State, regional, and national scope

❑ **Focus**

- Upstream, comprehensive strategies
- Middle-aged adults
- Connection between intimate partner violence and suicide

❑ **Center activities**

- Enhance access to data for prevention planning
- Systematically define and confront challenges of preventing suicide among middle-aged adults

Suicide Is Preventable

- ❑ **Growing evidence base demonstrates potential reach and impact**
- ❑ **Suicide prevention has crosscutting benefits**
- ❑ **Public health leadership can lead to broad strategies and national reductions in suicide rates**



Using Data to Increase Awareness and Prevention of Suicide: Colorado's Public Health Approach

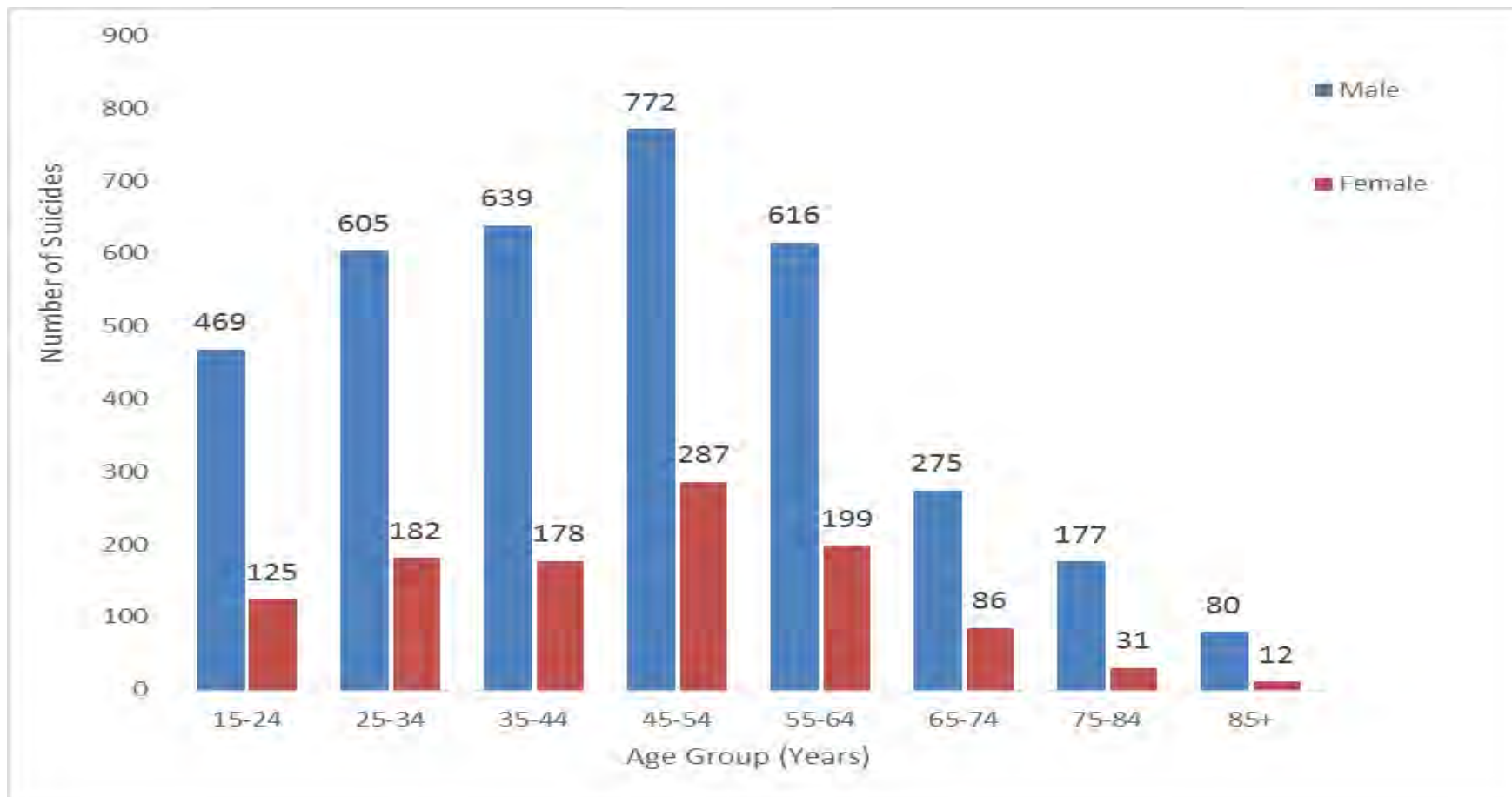


Jarrold Hindman, MS

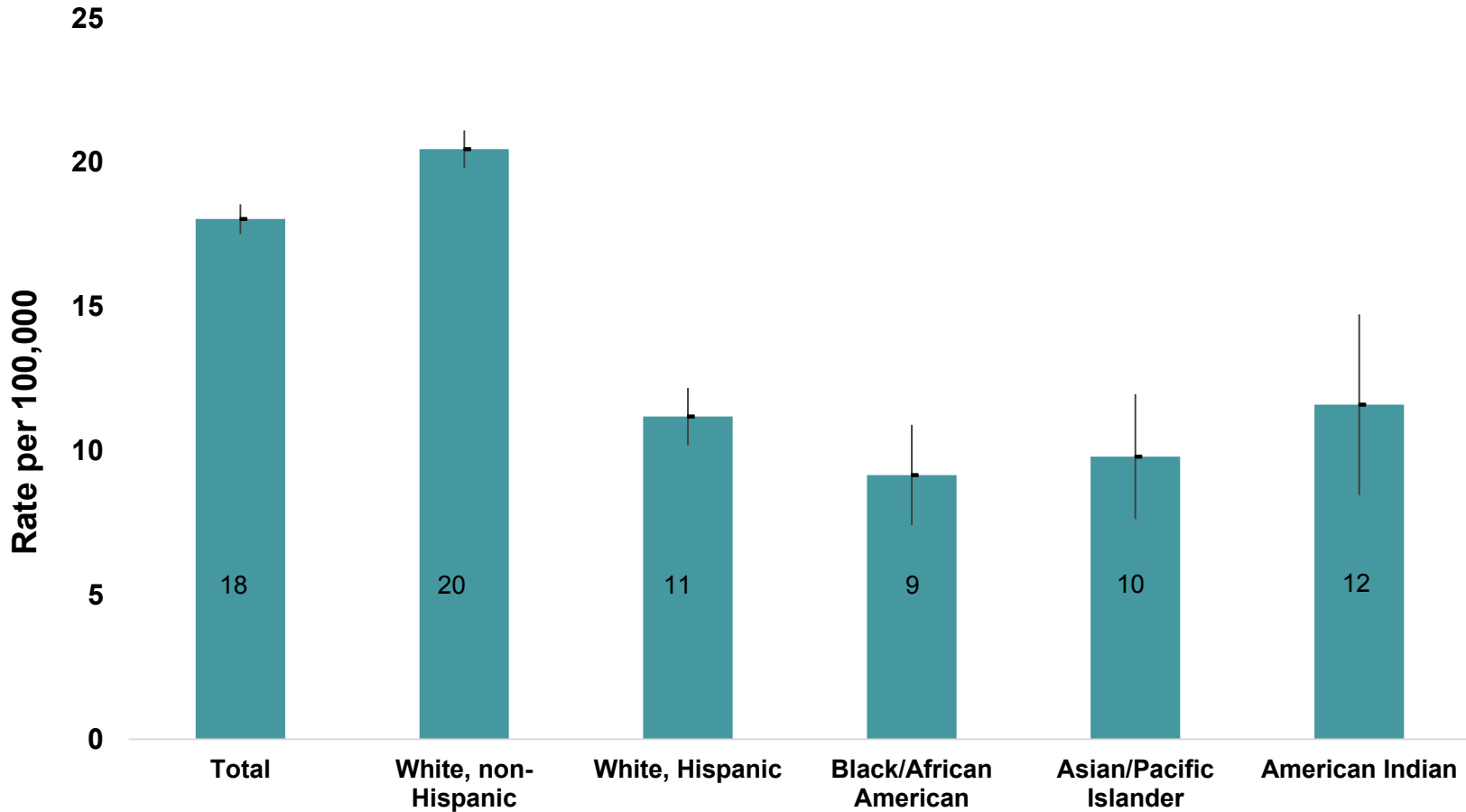
Violence and Suicide Prevention Section Manager

Colorado Department of Public Health and Environment

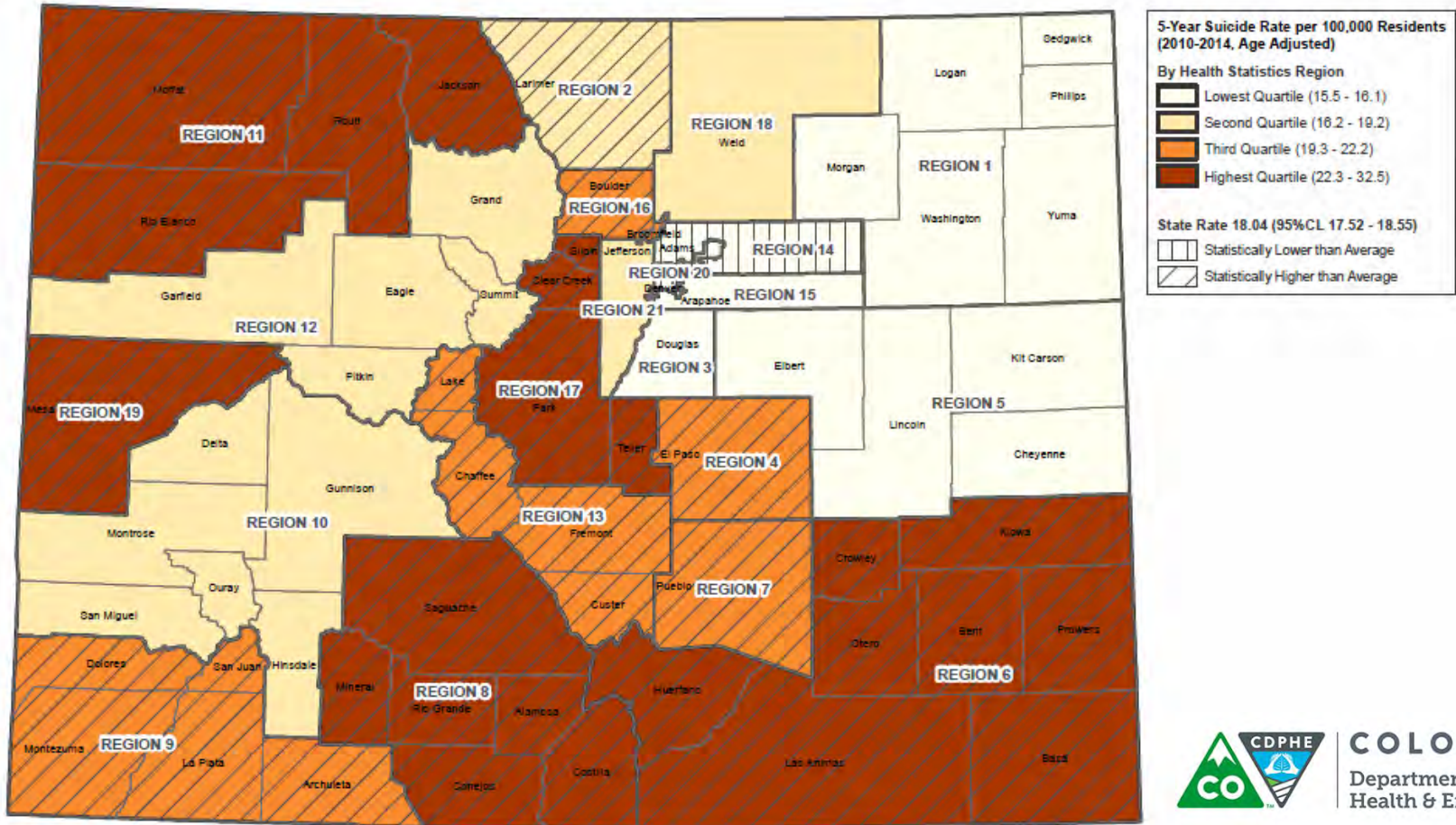
Suicides by Age and Gender Colorado, 2010 – 2014



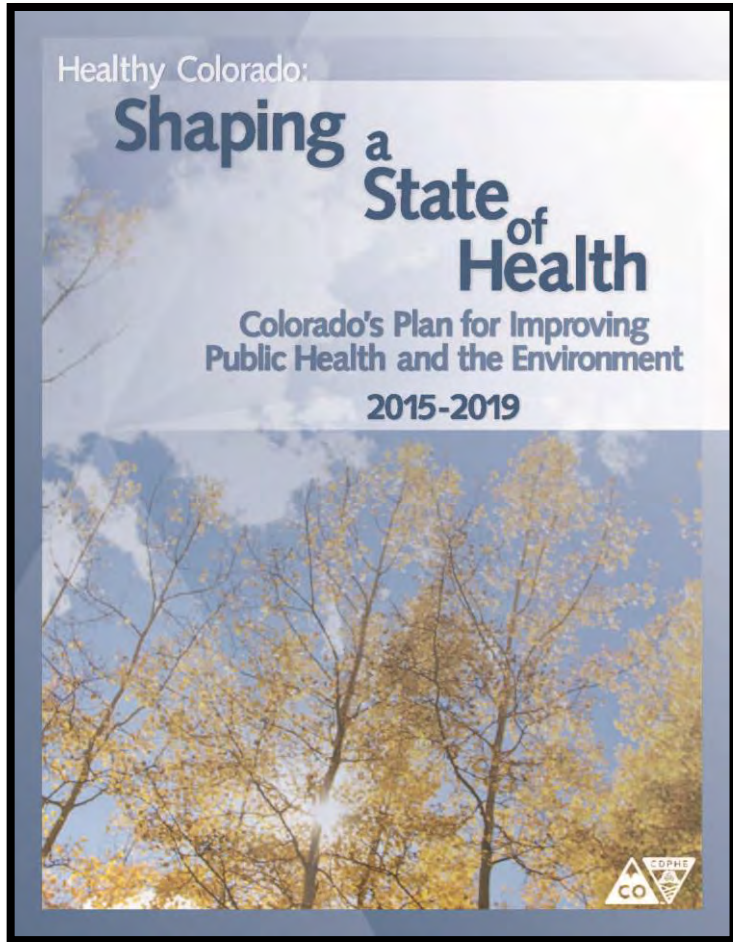
Age-adjusted Suicide Rates by Race and Ethnicity Colorado, 2010 – 2014



CO Age-adjusted Suicide Rates by Health Statistics Region, 2010 – 2014



Colorado's Public Health Priorities



Mental Health and Substance Abuse-identified as 1 of 2 flagship priorities

Strategies

1. Improve screening and referral
2. Reduce stigma to help-seeking by increasing
 - Visitors to www.mantherapy.org
 - Percent of men who self-report symptoms of depression

Colorado Office of Suicide Prevention (OSP)

- ❑ **Established and allocated state general funds in 2000**
- ❑ **One of four states with set-aside funds for suicide prevention**
- ❑ **OSP priorities through 2020**
 - Suicide Prevention Commission
 - High-risk populations
 - Middle-age men - Man Therapy
 - Emergency departments - ED-CALM
 - Primary prevention - Sources of Strength



COLORADO
Department of Public
Health & Environment

Colorado Suicide Prevention Commission

- ❑ **Twenty six member commission appointed through 2024**
- ❑ **Members include representatives of**
 - Education (K-12 and higher education)
 - Survivor – loss and lived experience
 - Mental health and primary care
 - Philanthropy
 - State agencies
 - CDPHE coordinates the Commission
 - Private business
 - Agriculture and ranching
 - Oil and gas industry
 - Faith-based groups
 - Law enforcement
 - U.S. military (active or veteran)

Colorado Suicide Prevention Commission

- ❑ **Setting statewide priorities and establishing workgroups to develop implementation strategies and recommendations**
- ❑ **Year 1 Workgroups**
 - Emergency Services
 - Training and Development
 - Primary Care

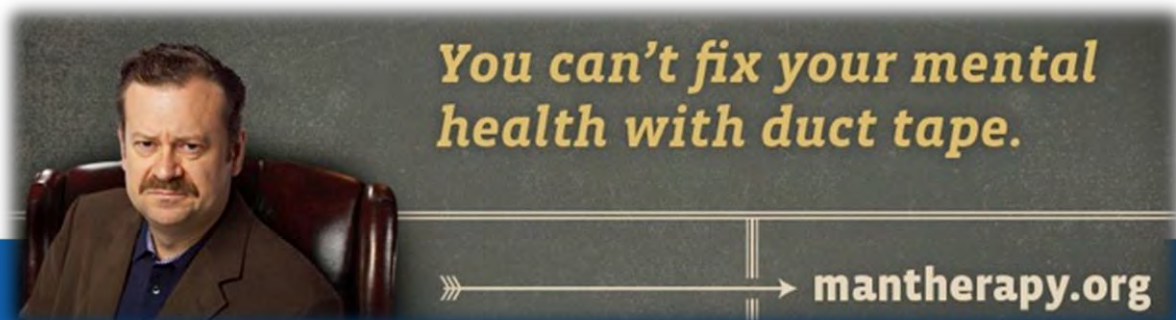
Man Therapy: A Data-based Outreach Program for Underserved High-risk Group

❑ Campaign Goals

1. Create social change about mental and overall wellness
2. Empower men and increase male help-seeking behavior
3. Long-term – reduce suicidal thoughts and deaths among men

❑ Survey Results

- 83% would recommend Man Therapy to a friend
- 73% - 18 Point Head Inspection directed to appropriate resources
- 51% agree or strongly agree to being more likely to seek help



Unpublished data

Firearm Deaths in CO, 2005 – 2013

 For every 1 unintentional
firearm death,



there were 15 firearm homicides



and 57 firearm suicides.

Emergency Department Counseling on Access to Lethal Means (ED-CALM)



Children's Hospital
Colorado

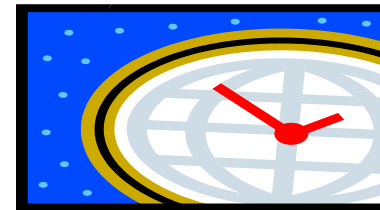
**Program for Injury Prevention,
Education & Research (PIPER)**
colorado school of public health



COLORADO
Department of Public
Health & Environment



HICRC
Harvard Injury Control Research Center



CALM

Center on Access to Lethal Means at
Dartmouth

ED-CALM – Program Objectives

- ❑ **Adapt the Counseling on Access to Lethal Means Online Training to pediatric emergency department (ED)**
- ❑ **Pilot the adapted training with ED clinicians**
- ❑ **Implement training and assess program outcomes**
- ❑ **Develop plans to scale-up implementation and rigorously evaluate the program**



ED-CALM–Preliminary Results from Education Program in a Pediatric Hospital

❑ **209 of 236 eligible families received the program**

- Most recalled receiving the information and found it useful
- >90% found the counseling respectful, the recommendations clear, the time sufficient to ask questions

❑ **Medication**

- >90% reported unlocked medication prior to ED visit
- <25% reported unlocked medication at follow-up

❑ **Firearms**

- <25% reported unlocked guns in the home before the ED visit
- None reported unlocked guns at follow-up

CO Sources of Strength Pilot

❑ Pilot Partners

- Office of Suicide Prevention
- Sexual Violence Prevention
- Child Fatality Prevention System
- Tony Grampas Youth Services

❑ Pilot Intent

- Program integration
- Shared resources
- Prioritize shared protective and risk factors
- Measure impact



What We Have Learned

- ❑ Use state-specific data to identify prevention priorities**
- ❑ Engage key local and state leaders to support and advance initiatives and monitor impacts**
- ❑ Take innovative and smart risks**
- ❑ Include primary prevention and public health approaches**

Progress, Partnerships, and Optimism in Preventing Suicide



Jerry Reed, Ph.D., MSW

Director, Suicide Prevention Resource Center

Co-Director, Injury Control Research Center for Suicide

Vice President, Education Development Center



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

20 Years Ago

- ❑ **Suicide seen as private matter between patients and healthcare providers**
- ❑ **Suicide not discussed as a public health problem**
- ❑ **Evidence about effective treatments was sparse**
- ❑ **Clinical training in suicide assessment and treatment was rare**
- ❑ **Little prevention capacity and infrastructure**
- ❑ **Virtually no funding for suicide prevention**

Key Milestones in Recognizing Suicide as a Public Health Priority

- ❑ **1997 – 1999: Senate Resolution 84 and House Resolution 212 both passed in the 105th Congress**
- ❑ **1999: Surgeon General's Call to Action to Prevent Suicide**
- ❑ **2001: First National Strategy for Suicide Prevention**
- ❑ **2002: Suicide Prevention Resource Center**
- ❑ **2005: National Suicide Prevention Lifeline**
- ❑ **2010: Action Alliance for Suicide Prevention**

Action Alliance for Suicide Prevention

□ Vision

- A nation free from the tragic experience of suicide

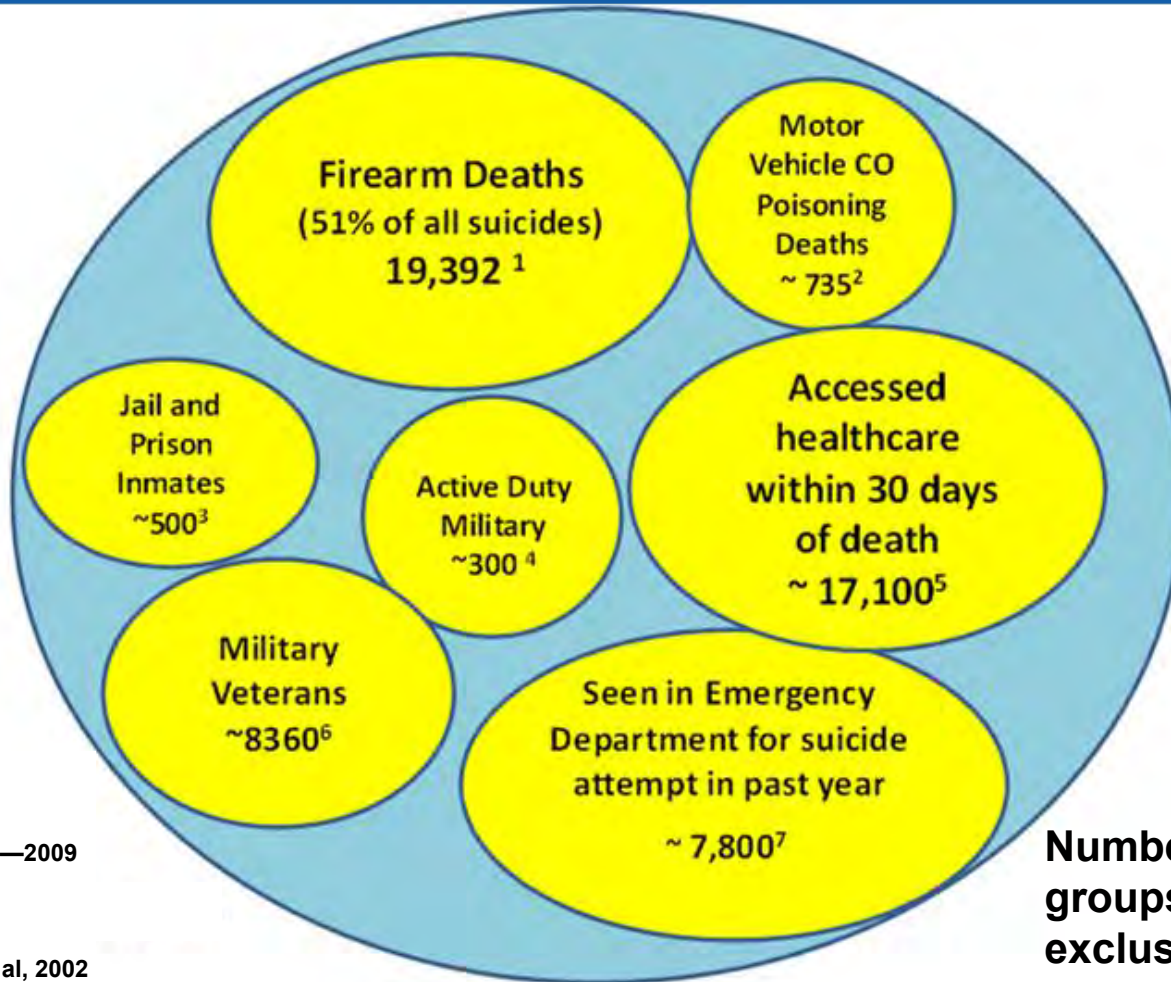
□ Advance the National Strategy for Suicide Prevention (NSSP) by

- **Championing** suicide prevention as a national priority
- **Catalyzing** efforts to implement high-priority NSSP objectives
- **Cultivating** the resources needed to sustain progress

□ Co-leads

- Private sector: Robert Turner, Senior VP, Union Pacific Railroad
- Public sector: Dr. Carolyn Clancy, VA Chief Medical Officer

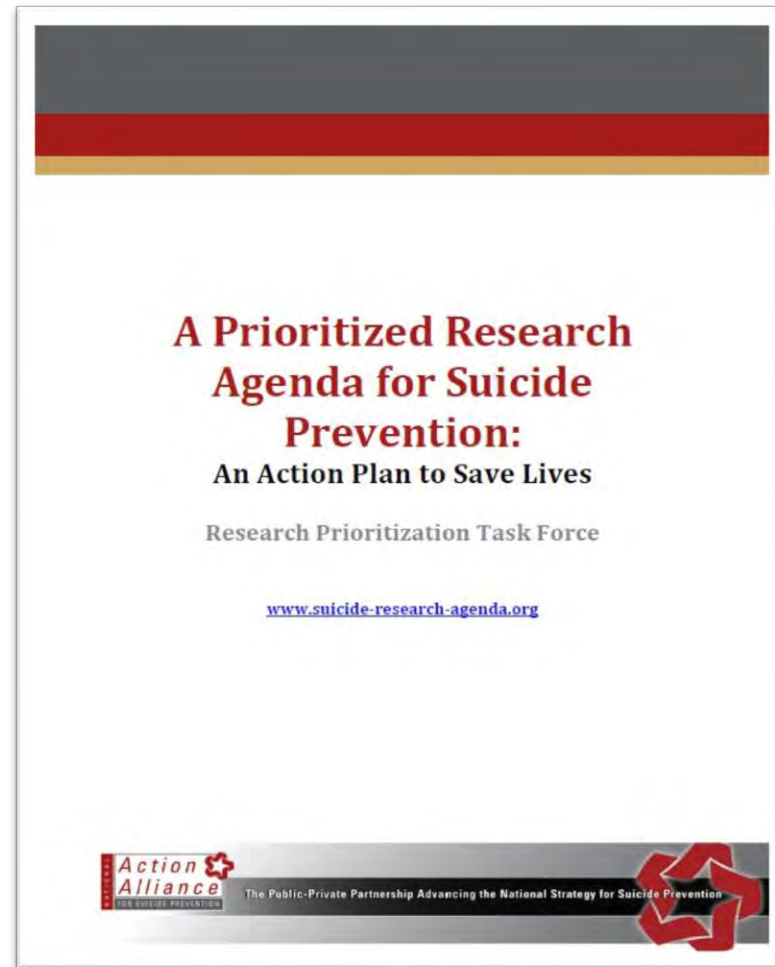
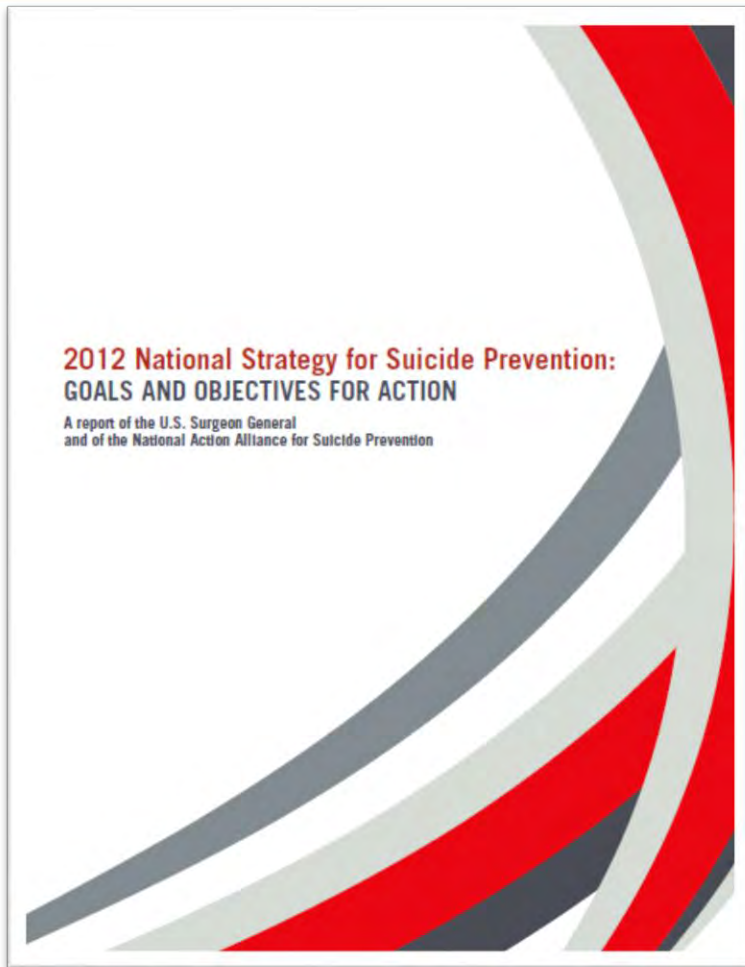
Saving 20,000 Lives



Number of deaths in groups not mutually exclusive

- Data Sources:
1. CDC WISQARS 2010
 2. CDC WONDER 2010
 3. Bureau of Justice Statistics 2008—2009
 4. DoDSER CY 2011 Report
 5. Trofimovich et al, 2012
 6. Dept of Veterans Affairs, 2012
 7. CDC WISQARS 2010 & Owens et al, 2002

National Strategy for Suicide Prevention and Prioritized Research Agenda



National Action Alliance for Suicide Prevention: Research Prioritization Task Force. (2014).
actionallianceforsuicideprevention.org/sites/actionallianceforsuicideprevention.org/files/Agenda.pdf

Six Key Research Questions

- 1) Why do people become suicidal?**
- 2) How can we better or optimally detect/predict risk?**
- 3) What interventions are effective? What prevents individuals from engaging in suicidal behavior?**
- 4) What services are most effective for treating the suicidal person and preventing suicidal behavior?**
- 5) What other types of preventive interventions (outside health care systems) reduce suicide risk?**
- 6) What new and existing research infrastructure is needed to reduce suicidal behavior?**

Action Alliance Resources



Suicide Prevention and the Clinical Workforce: Guidelines for Training

The Way Forward:
Pathways to
hope, recovery, and wellness
with insights from lived experience



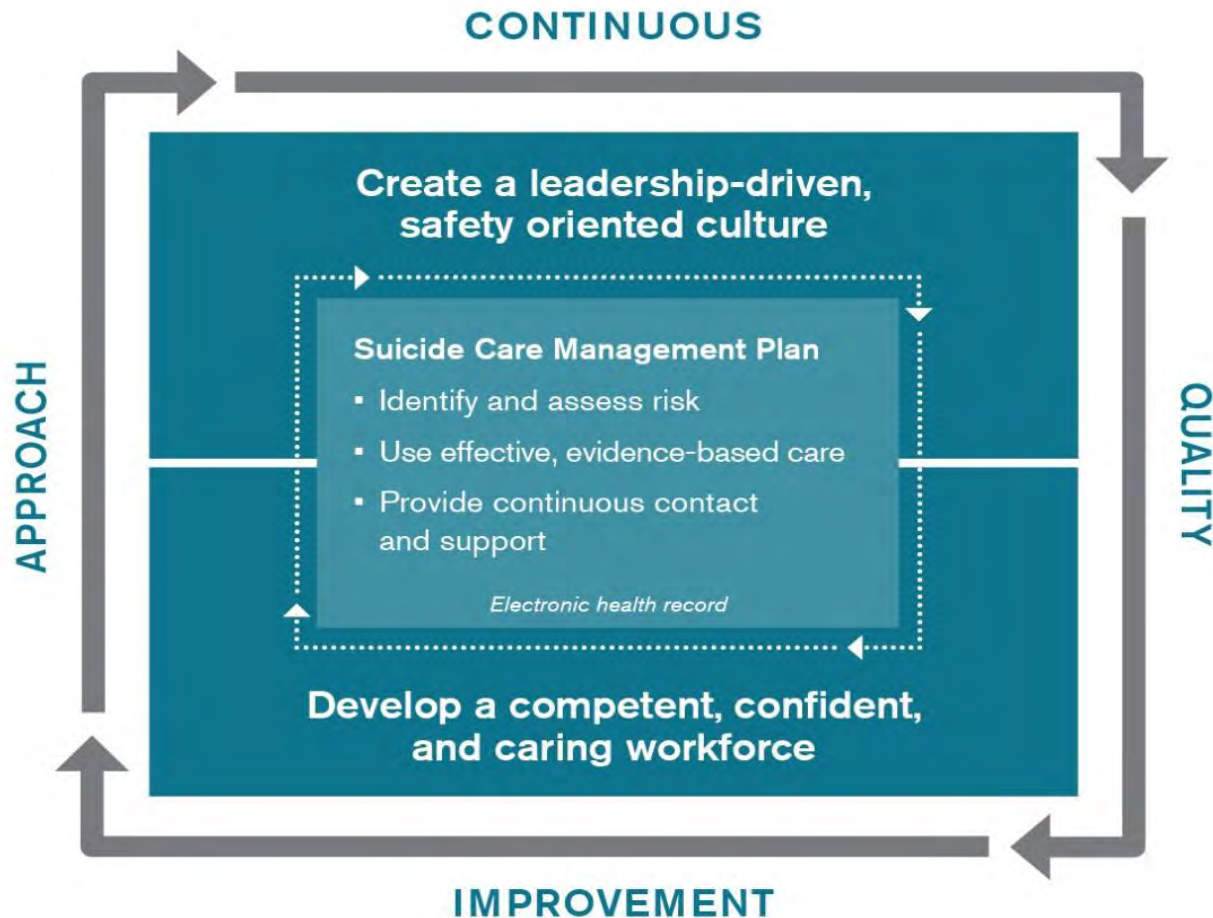
Comprehensive Approach to Suicide Prevention



National Strategy Priorities

- ❑ **Transform healthcare systems**
 - Zero Suicide Initiative
- ❑ **Change the conversation about suicide**
 - Media guidelines
- ❑ **Implement suicide prevention programs**
 - Garrett Lee Smith Act

Zero Suicide: Transforming Healthcare Systems



Recommendations for Reporting on Suicide

- ❑ Inform audience without sensationalizing
- ❑ Include crisis phone numbers
- ❑ Include sidebars with warning signs and what to do
- ❑ Report on suicide as a public health issue
- ❑ Use recent CDC data and non-sensational words (“rise” or “higher”) to describe trends

RECOMMENDATIONS FOR REPORTING ON SUICIDE

Developed in collaboration with: American Association of Suicidology, American Foundation for Suicide Prevention, Canterbury Suicide Project - University of Glasgow, Christchurch, New Zealand, Altemusberg Public Safety Center, Columbia University Department of Psychiatry, Cornell Safety.org, International Association for Suicide Prevention, Oak Point on Health & Suicide, Hospital University of Nevada, National Alliance on Mental Illness, National Institute of Mental Health, New York State Psychiatric Institute, Substance Abuse and Mental Health Services Administration, Suicide Awareness, Voice of Education, Suicide Prevention Resource Center, The Centers for Disease Control and Prevention, CDC and UCLA, School of Public Health, Community Health Services.

IMPORTANT POINTS FOR COVERING SUICIDE

- More than 50 research studies worldwide have found that certain types of news coverage can increase the likelihood of suicide in vulnerable individuals. The magnitude of the increase is related to the amount, duration and prominence of coverage.
- Risk of additional suicides increases when the story explicitly describes the suicide method, uses dramatic/graphic headlines or images, and repeated/extensive coverage sensationalizes or glamorizes a death.
- Covering suicide carefully, even briefly, can change public misperceptions and correct myths, which can encourage those who are vulnerable or at risk to seek help.

Suicide is a public health issue. Media and online coverage of suicide should be informed by using best practices. Some suicide deaths may be newsworthy. However, the way media covers suicide can influence behavior negatively by contributing to contagion or positively by encouraging help-seeking.

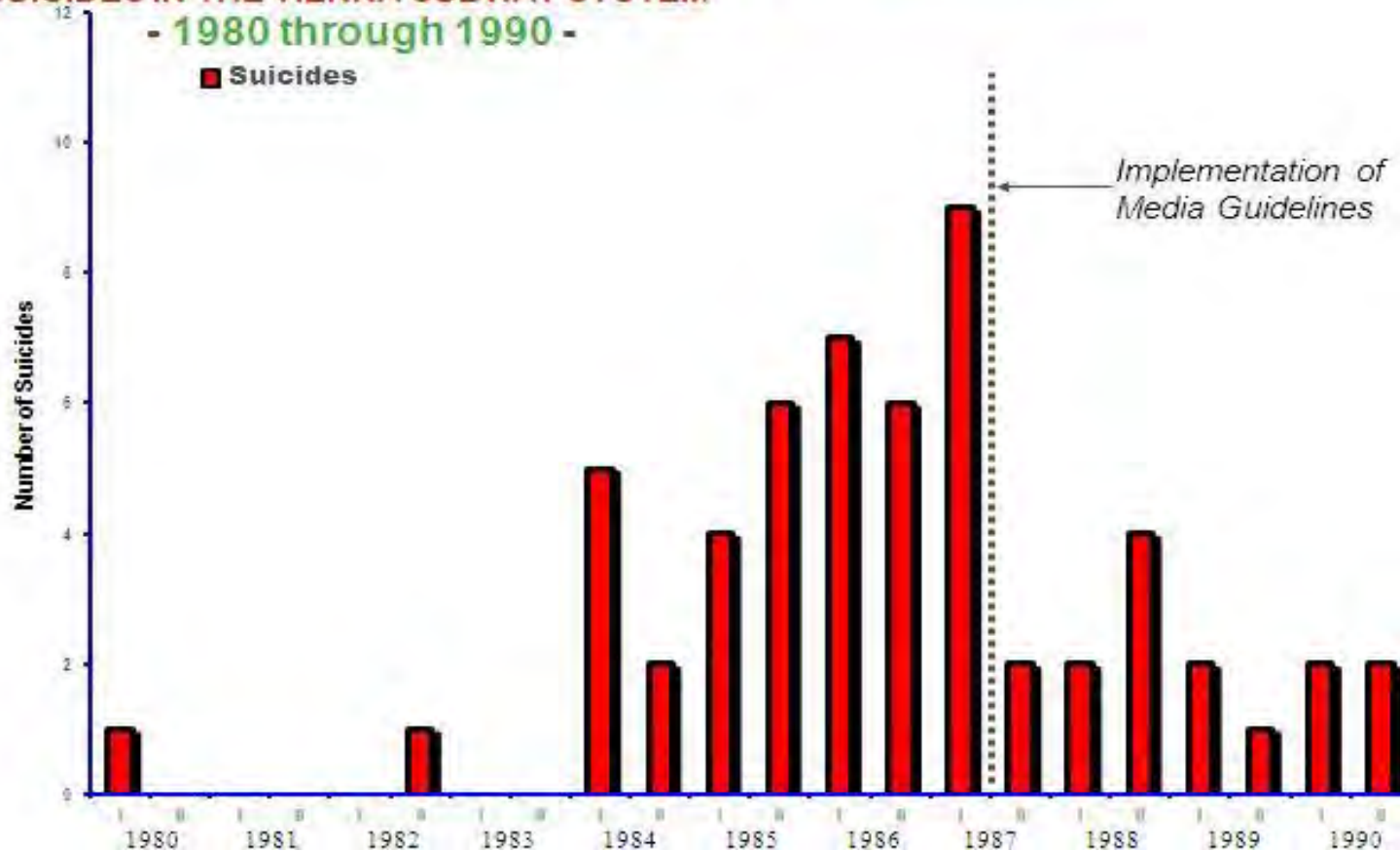
Suicide Contagion or “Copycat Suicide” occurs when one or more suicides are reported in a way that contributes to another suicide.

References and additional information can be found at: www.ReportingOnSuicide.org.

INSTEAD OF THIS: ❌	DO THIS: ✅
• Big or sensationalistic headlines, or prominent placement (e.g., “Kurt Cobain Used Shotgun to Commit Suicide”).	• Less reporting informs without sensationalizing the event (e.g., “Kurt Cobain Dead at 27”).
• “John Doe left a suicide note saying...”	• “A note from the deceased was found and is being reviewed by the medical examiner.”
• Including photos/videos of the location or method of death, grieving family, friends, memorials or funerals.	• Use school/work or family photo; include hotline logo or local crisis phone numbers.
• Describing recent suicides as an “epidemic,” “skyrocketing,” or other strong terms.	• Carefully investigate the most recent CDC data and use non-sensational words like “rise” or “higher.”
• Describing a suicide as inexplicable or “without warning.”	• Most, but not all, people who die by suicide exhibit warning signs. Include the “Warning Signs” and “What to Do” sidebar (from p. 2) in your article if possible.
• Investigating and reporting on suicide similar to reporting on crimes.	• Report on suicide as a public health issue.
• Quoting/interviewing police or first responders about the causes of suicide.	• Seek advice from suicide prevention experts.
• Referring to suicide as “successful,” “unsuccessful” or a “failed attempt.”	• Describe as “died by suicide” or “completed” or “killed him/herself.”

Implementing Media Recommendations Can Save Lives

EVIDENCE OF MEDIA RECOMMENDATIONS' EFFECTIVENESS SUICIDES IN THE VIENNA SUBWAY SYSTEM



Etzersdorfer E, Sonneck G, Nagel-Kuess S. NEJM 327(7), 502-503.

Garrett Lee Smith Act

- ❑ **Garrett Lee Smith, son of Senator and Mrs. Gordon Smith, died by suicide in 2003**
- ❑ **Over 369 grantees (states, territories, tribal communities, and campuses) have been funded**
- ❑ **2015 findings**
 - Counties implementing training programs had significantly lower rates of youth suicide in the year after implementation
 - Estimated 427 deaths averted
 - Differences in rates were not seen 2 or more years after implementation

Today

- ❑ **Every state has a strategy and has received a Garrett Lee Smith grant**
- ❑ **32 states participate in the National Violent Death Reporting System**
- ❑ **8 states focus on suicide prevention with CDC Core funding for Violence and Injury Prevention grants**
- ❑ **Over 30,000 clinicians trained in assessing and managing risk for suicidal behavior**

Additional Research is Needed

Where is the Federal Funding to **Fight Suicide**?

In the last 10 years, we've invested federal funding to research leading causes of death like HIV/AIDS, heart disease, and prostate cancer. Major progress has led to decreased mortality rates. It's time we do the same with suicide.



AMERICAN FOUNDATION FOR
Suicide Prevention

afsp.org

LEADING CAUSES OF DEATH

2013 FUNDING

2003-2013 DEATH RATE

HIV/AIDS



\$2.9 Billion



53.2%

Heart Disease



\$1.2 Billion



29.1%

Prostate Cancer



\$266 Million



13.7%

Suicide



\$37 Million



20.4%

Death rates taken from Centers for Disease Control data for 2003 and 2013 (most recent available). Each flask represents \$1 billion of research funding by the National Institutes of Health.

Actions Needed Today to Save More Lives Tomorrow

- ❑ **Support new discovery in suicide prevention**
- ❑ **Adopt effective programs widely, and sustain their implementation over time**
- ❑ **Transform health systems so suicide attempt survivors and other persons seeking help have care access and options**
- ❑ **Involve communities and schools in primary and other types of prevention**

September is National Suicide Prevention Month



Everyone has a role in preventing suicide

- Decrease stigma
- Talk safely about suicide
- Know the warning signs
- Give support
- Encourage help seeking

Continue the conversation

- Ask the Experts – Facebook Forum
- September 21 – 25, 2015
- www.facebook.com/vetoviolence