Progress in Suicide Prevention

Presented by:

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DISCLOSURES

Research/Grants:
National Institutes of Health (NIH), Stanley Medical Research Institute

Consulting (last three years):

Stockholder:
Xhale, Celgene, Seattle Genetics, Abbvie, OPKO Health, Inc., Antares, BI Gen Holdings, Inc., Corcept Therapeutics Pharmaceuticals Company, Trends in Pharma Development LLC.

Scientific Advisory Boards:
American Foundation for Suicide Prevention (AFSP), Brain and Behavior Research Foundation (BBRF), Xhale, Anxiety Disorders Association of America (ADAA), Skyland Trail, Bracket (Clintara), Laureate Institute for Brain Research (LIBR), Inc.

Board of Directors:
AFSP, Gratitude America, ADAA
Income sources or equity of $10,000 or more:

Patents:
Method and devices for transdermal delivery of lithium (US 6,375,990B1)
Method of assessing antidepressant drug therapy via transport inhibition of monoamine neurotransmitters by ex vivo assay (US 7,148,027B2)

Speakers Bureau:
None
U.S. Suicide Facts
1970-2015

Per 100,000

U.S. Suicide Facts

2017 U.S. CDC

- 47,173 suicides
- 129/day, every 12 min in U.S.
- 10th leading cause of death in U.S.
  - 2nd for 15-34 yr, 4th for adults 24-64 yr
- Regional & demographic differences
- Veterans rate 20% higher than age-matched
- For every death ~25 suicide attempts
  - 1.4M adults attempt annually
- 60% of Americans experience loss to suicide
- Suicide rate greatly exceeds the homicide rate
- >500,000 visits to emergency rooms due to self-harm
U.S. Suicide Rates by Race/Ethnicity, 1999-2014

Age-Adjusted Rate

- White
- American Indian
- Hispanic
- Asian/Pacific Islander
- Black
U.S. Suicide Rates by Sex, 1981-2014

- Men
- Women
Methods of Suicide Death in U.S.

- Firearm: 49.9%
- Suffocation/Hanging: 26.8%
- Overdose/Poisoning: 15.4%
- Cutting: 1.7%
- Drowning: 1.15%
- Other: 5.0%
Suicide Rates and the Declining Psychiatric Hospital Bed Capacity in the United States

![Graph showing the relationship between mean number of psychiatric hospital beds and suicide rates](image-url)
Main Finding: Rates of suicide have increased substantially among younger Veterans while remaining relatively stable among civilians ages 18–29.
Interacting Risk and Protective Factors

WHY DOES SUICIDE OCCUR

Biological Factors
Psychological Factors
Social and Environmental Factors

Current Life Events

SUICIDE
A number of psychological autopsy studies have found that approximately 90% of all completed suicides could be retrospectively diagnosed with a major mental disorder.
Risk Factors for Suicide

• Mental health conditions
• Previous suicide attempt
• Serious physical illness/chronic pain
• Specific symptoms
• Family history of mental illness and suicide
• Childhood trauma
Protective Factors

- Strong support
- Connectedness
- Strong therapeutic alliance
- Accessing mental health care
Risk of Suicide After Cancer Diagnosis in England

Katherine E. Henson, MSc, DPhil; Rachael Brock, MB, BChir; James Charnock, MSci; Bethany Wickramasinghe, BSc; Olivia Will, MBChB, PhD, FRCS; Alexandra Pitman, MSc(Econ), MBBS, MRCPsych, PhD
Figure. Suicide Standardized Mortality Ratios (SMRs) and Absolute Excess Risks (AERs) per 10,000 Person-Years at Risk by Follow-up Period

A Standardized mortality ratios

B Absolute excess risks

Estimates of SMRs (A) and AERs (B) are presented in eTable 5 in the Supplement. Error bars indicate 95% CIs.
Positron Emission Tomographic Imaging of the Serotonergic System and Prediction of Risk and Lethality of Future Suicidal Behavior

Maria A. Oquendo, MD; Hanga Galfalvy, PhD; Gregory M. Sullivan, MD; Jeffrey M. Miller, MD; Matthew M. Milak, MD; M. Elizabeth Sublette, MD, PhD; Sebastian Cisneros-Trujillo, MD; Ainsley K. Burke, PhD; Ramin V. Parsey, MD, PhD; J. John Mann, MD
Childhood Abuse, Household Dysfunction, and the Risk of Attempted Suicide Throughout the Life Span: Findings From the Adverse Childhood Experiences Study

Shanta R. Dube, MPH; Robert F. Anda, MD, MS; Vincent J. Felitti, MD; Daniel P. Chapman, PhD; David F. Williamson, PhD; Wayne H. Giles, MD, MS
Figure 1. Prevalence of multiple childhood adverse experiences (ACEs) and association between number of ACEs and lifetime history of attempted suicide (n=17,337). (Adapted from Dube et al.)
The role of inflammatory cytokines in suicidal behavior: A systematic review

Gianluca Serafini a,*, Maurizio Pompili a, Maria Elena Seretti a, Henry Stefani a, Mario Palermo a, William Coryell b, Paolo Girardi a

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European Neuropsychopharmacology (2013) 23, 1672-1686
Timing Matters

• Intense suicidal urge is short
• Transitions in life are higher risk times
• Ambivalence is at play: mixture of desire to live versus to die/escape pain
Means Matter

• Limiting access to lethal means saves lives and drives down rates for entire regions.
  – Coal gas (UK)
  – Bridge barriers
  – Pesticides (Asia)
  – Medication blister pkg
  – Firearms policy changes (Israel)