2-1-1 TALKS

*Helping those that help others.*

HEALTH UNIVERSITY OF UTAH

ROCKY MOUNTAIN MIRECC

VA HEALTH CARE Defining EXCELLENCE in the 21st Century

# SUICIDE IN UTAH

## The Problem, the 'Altitude Hypothesis', & Research at the University of Utah

**June 26, 2019**


**Douglas Kondo, MD**

**VA Salt Lake City Medical Center**

**Mental Illness Research, Education and Clinical Center (MIRECC)**

**University Neuropsychiatric Institute (UNI)**

**University of Utah School of Medicine**



Utah 2-1-1 Get Help. Give Help.

United Way

# DISCLOSURE AND CONFLICT OF INTEREST STATEMENT

- **Research Support:**
  - VA I01CX001611
  - VA I01CX000812
  - NIDA DA043248
  - NIDA DA041134
  - NIMH MH096858
  - NIMH MH090817
  - Dept. of Veterans Affairs Mental Illness Research, Education and Clinical Center (MIRECC)
  - NARSAD Young Investigator
  - Depressive and Bipolar Disorder Alternative Treatment Foundation (DBDAT)
  - Utah Science Technology and Research initiative (USTAR; Utah State Legislature)
- **Drug Company Speaker's Bureau: None.**
- **Pharmaceutical Stock Shareholder: None.**
- **Consultant to Industry: None.**

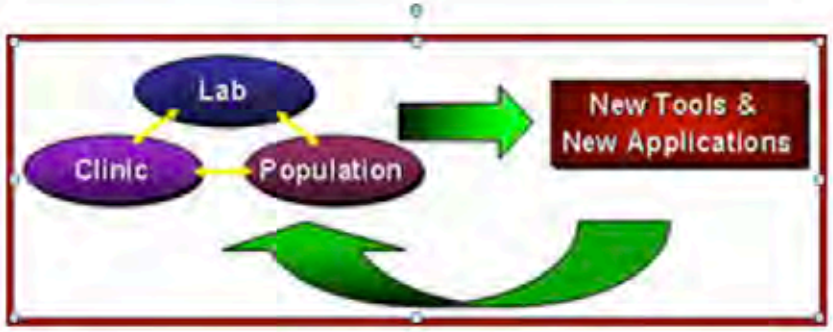
# OBJECTIVES

- Present recent findings RE:  Increasing U.S. national suicide rates
- Discuss Utah's suicide crisis, in the context of the national statistics
- Present the 'Altitude Hypothesis' – and why we believe altitude may be related to suicide, psychiatric disorders, and substance use
- Review some of Utah's key statewide suicide prevention initiatives
- Describe current research on suicide at the Salt Lake City VA Medical Center, and the University of Utah School of Medicine

# TRANSLATIONAL MEDICAL RESEARCH

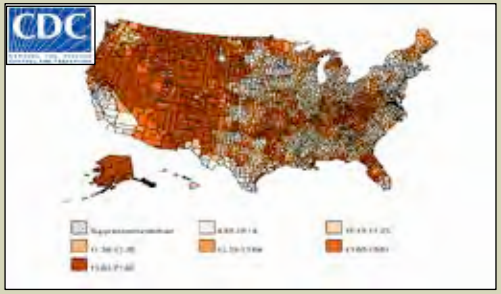
***Translational Research*** **refers to efforts to apply new knowledge generated via research…**

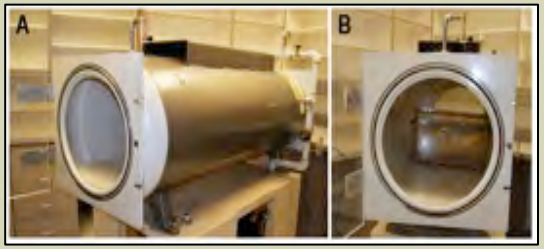
**…by "translating" it into new approaches to diagnosis, prevention and treatment of disease.**



# Translational Research at the VA Salt Lake City MIRECC and Univ. of Utah

**Brain Energy Metabolism**



# SUICIDE CONTINUES TO BE IN THE NEWS…


2-1-1 TALKS

Helping those that help others.

The Salt Lake Tribune

**4A boys' soccer: Skyline overcomes PK pressure for title**

By Tom Wharton The Salt Lake Tribune

Published: May 22, 2015 9:52 am

4A boys' soccer • Freshman puts the game-winner past East for the victory.

Utah 2-1-1 Get Help. Give Help.

United Way

CDC Centers for Disease Control and Prevention

Morbidity and Mortality Weekly Report (*MMWR*)

# Vital Signs: Trends in State Suicide Rates — United States, 1999–2016 and Circumstances Contributing to Suicide — 27 States, 2015

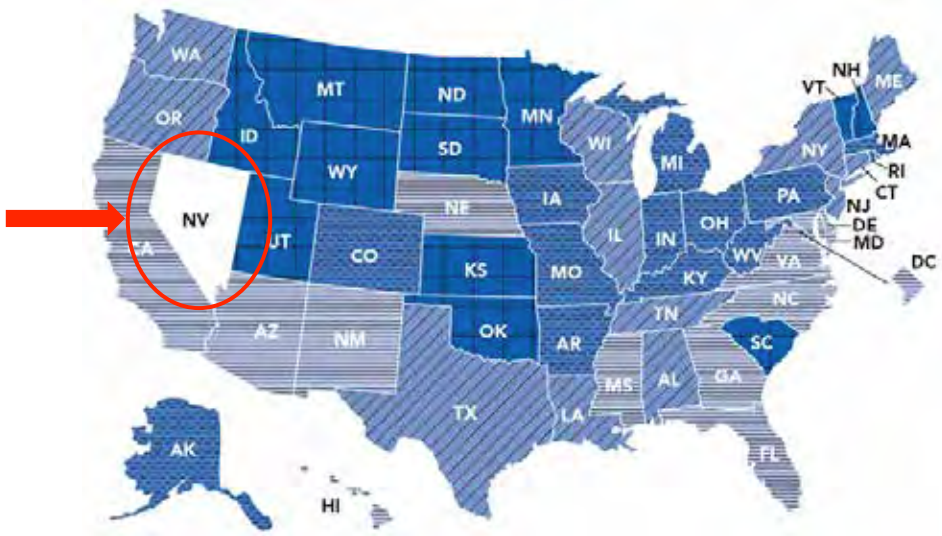
## Summary

**What is already known about this topic?**

In 2016, nearly 45,000 persons died by suicide in the United States. Mental health conditions are one of several contributors to suicide.

**What is added by this report?**

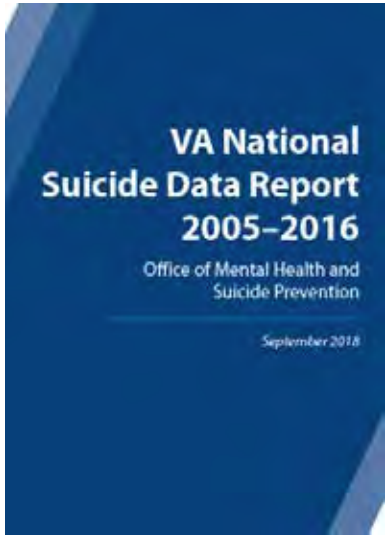
During 1999–2016, suicide rates increased in nearly every state, including >30% increases in 25 states. 2015 data from 27 states indicate 54% of suicide decedents were not known to have mental health conditions. Relationship, substance use, health, and job or financial problems are among the other circumstances contributing to suicide.

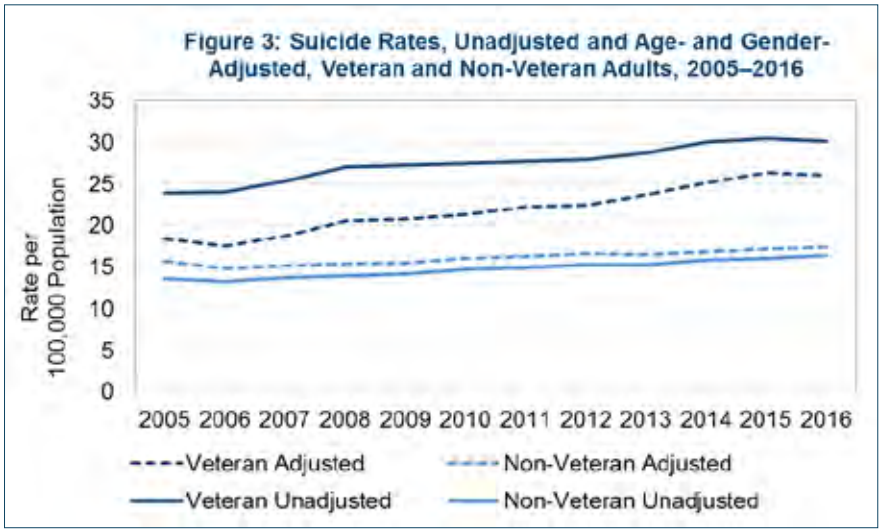



**Suicide rates rose across the US from 1999 to 2016.**

| | |
|---|---|
| Increase | 38 - 58% |
| Increase | 31 - 37% |
| Increase | 19 - 30% |
| Increase | 6 - 18% |
| Decrease | 1% |

SOURCE: *CDC's National Vital Statistics System; CDC Vital Signs, June 2018.*





VA chief pressed on efforts to prevent veteran suicides

Military, veteran suicide at a 'crisis point.' Lawmakers push DoD, VA for answers

ABBIE BENNETT

- The suicide rate for Veterans and non-Veterans increased by ~26% and ~21%, respectively.
- There were more than 6,000 Veteran suicides each year from 2008-2016, averaging 20-22 suicides per day.
- The Veteran suicide rate is 1.5 times greater than for non-Veteran adults.
- The suicide rate for women Veterans was 1.8 times greater than the suicide rate for non-Veteran women.
- Suicide among never-Federally activated National Guard and Reserve former Service members increased from 2005-15.
- Veterans recently using VA services have higher suicide rates than Veterans who did not, Veterans overall, and non-Veterans.
- From 2005-16, there was a lower increase in suicide among Veterans receiving VA care (14%) than among Veterans who did not (26%).

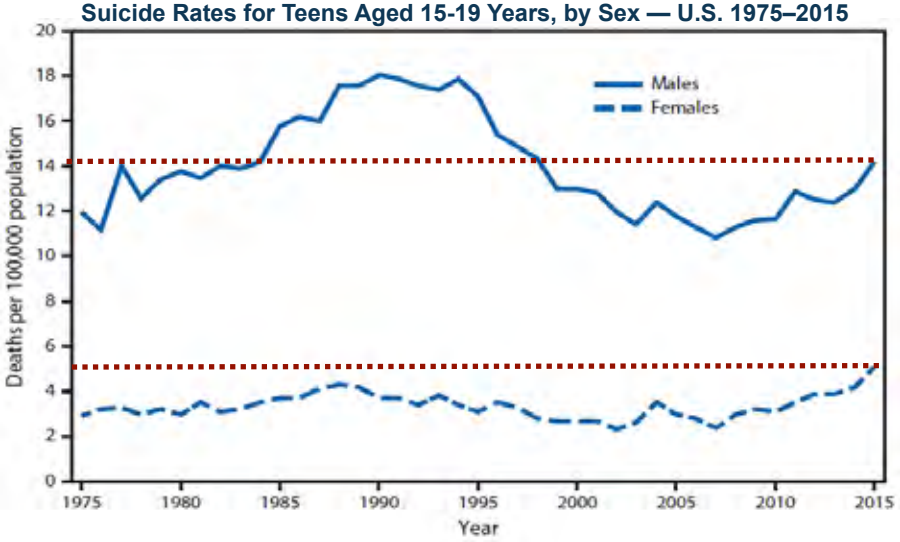
CNN Health + Live TV

## Suicide rate hit 40-year peak among older teen girls in 2015

By Susan Scutti, CNN

Updated 5:19 PM ET, Thu August 3, 2017

**Suicide Rates for Teens Aged 15-19 Years, by Sex — U.S. 1975–2015**




NIH National Institutes of Health

NEWS RELEASES

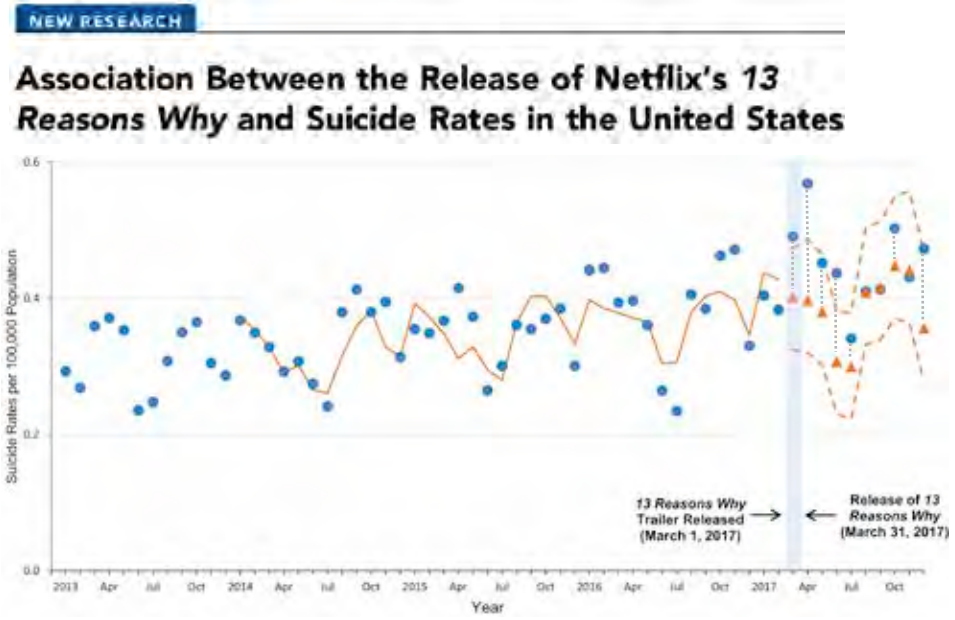
Monday, March 11, 2019

## NIH study shows many preteens screen positive for suicide risk during ER visits

*Findings highlight the importance of screening kids as young as 10 for suicide risk in emergency settings.*

- **Sites**: 1) Children's National Medical Center, Washington, DC; 2) Children's Hospital, Boston, MA; 3) Nationwide Children's Hospital, Columbus, OH.
- **Participants**: Children aged 10-12 (n=79) in the Emergency Department (ED) with medical or psychiatric complaints.
- **Results**
  - The positive screen rate was 29%
  - The positive rate in psychiatric patients was 54% vs. 7% of medical patients
  - In the sample 17.7% reported a history of suicidal behavior or attempt, including 6% at ≤ 10 years of age
- **Conclusions**
  - Nearly 18% of preteens in the E.D. have previously attempted suicide: Therefore, preteenagers think about suicide and engage in suicidal behavior (including 6% < age 11)
  - The fact that 7% of preteens with a "medical" complaint screened positive, highlights need for universal screening

# ARE SOCIETAL TRENDS & CULTURAL FORCES HAVING AN IMPACT?


- **Blue circles indicate observed suicide rates between 2013 and 2017.**

**—— Orange solid line indicates underlying level, trend, and seasonal variation prior to release.**

- **The leading edge of the shaded area indicates the initial airing of the 13 Reasons Why trailer.**
- **The trailing edge of the shaded area indicates the release date of 13 Reasons Why.**

**Δ Orange triangles indicate the forecasted suicide rate**

**- - - Orange dashed lines indicate the 95% prediction intervals.**

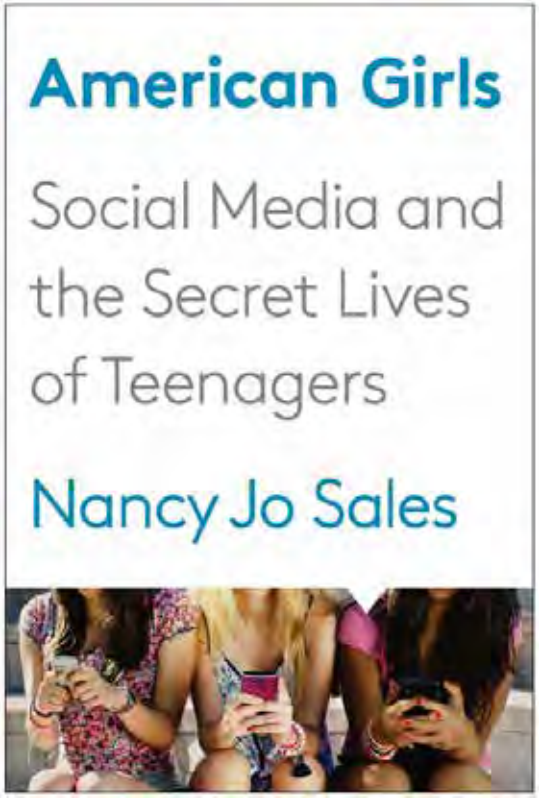
Conclusion: Suicide rates in March, April, June, December 2017 were significantly higher than forecast.

Invited Commentary | Psychiatry

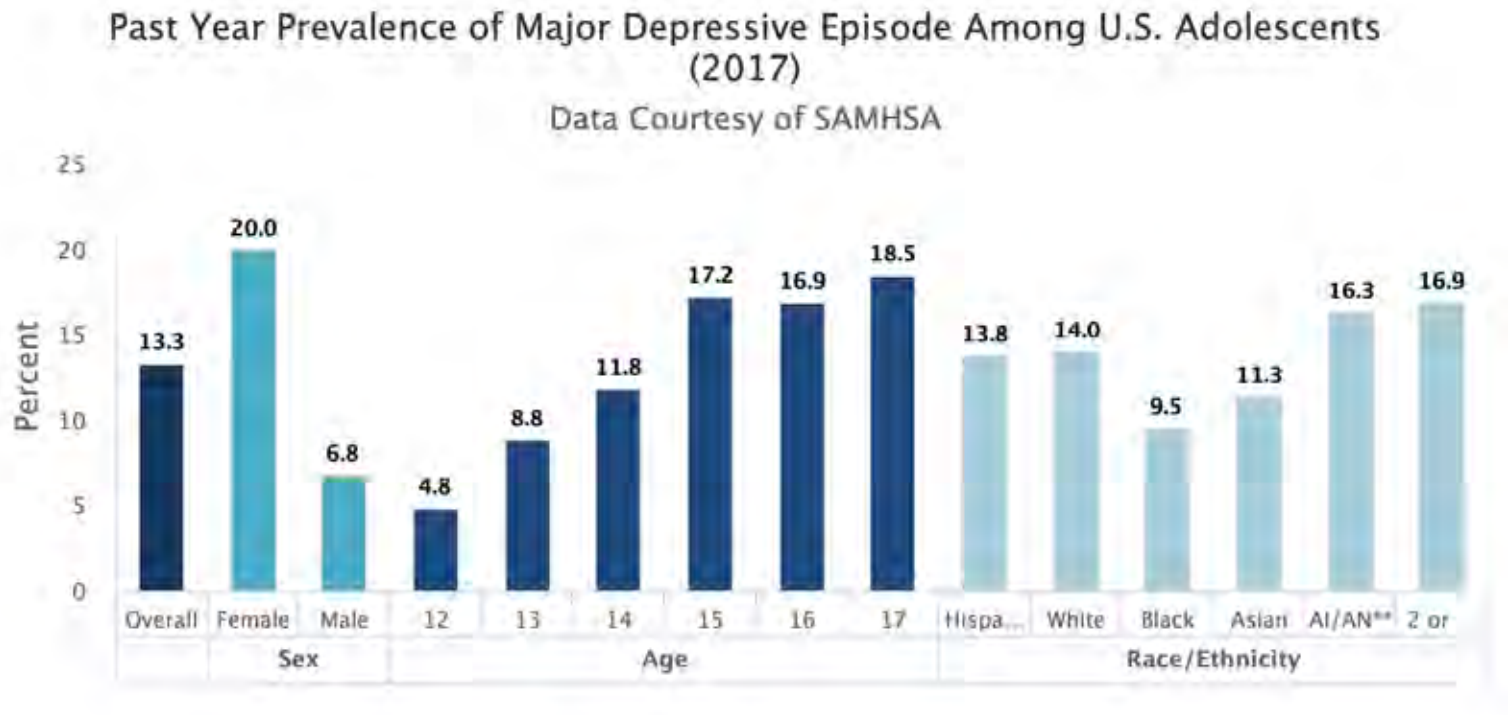
May 17, 2019

## Increasing Suicide Rates in Early Adolescent Girls in the United States and the Equalization of Sex Disparity in Suicide

### The Need to Investigate the Role of Social Media

# ADOLESCENT DEPRESSION in the U.S. – 1-Year Prevalence



# What About Here in Utah?

# Ranking America's Mental Health (2007)

- **10.1%** of Utah adolescents had experienced a major depressive episode within the past year vs. the U.S. national average of 8.9%
- Adult Utahns with "serious psychological distress" = **14.58%** vs. national average of 11.63%
- Number of days out of the past **30 days**, that Utahns reported their mental health was "Poor" = **3.27** vs. national average of 3.31
- When combined, these factors gave Utah the highest composite **"Depression Status"**
- Including the District of Columbia, Utah's rank was: **51/51**

MHA Mental Health America

**State Ranking on Depression Status**

| | Ranking by Depression Status Composite Measure |
|---|---|
| SOUTH DAKOTA | 1 |
| HAWAII | 2 |
| NEW JERSEY | 3 |
| IOWA | 4 |
| MARYLAND | 5 |
| MINNESOTA | 6 |
| LOUISIANA | 7 |
| ILLINOIS | 8 |
| NORTH DAKOTA | 9 |
| TEXAS | 10 |
| WYOMING | 42 |
| OHIO | 43 |
| MISSOURI | 44 |
| IDAHO | 45 |
| OKLAHOMA | 46 |
| NEVADA | 47 |
| RHODE ISLAND | 48 |
| KENTUCKY | 49 |
| WEST VIRGINIA | 50 |
| UTAH | 51 |

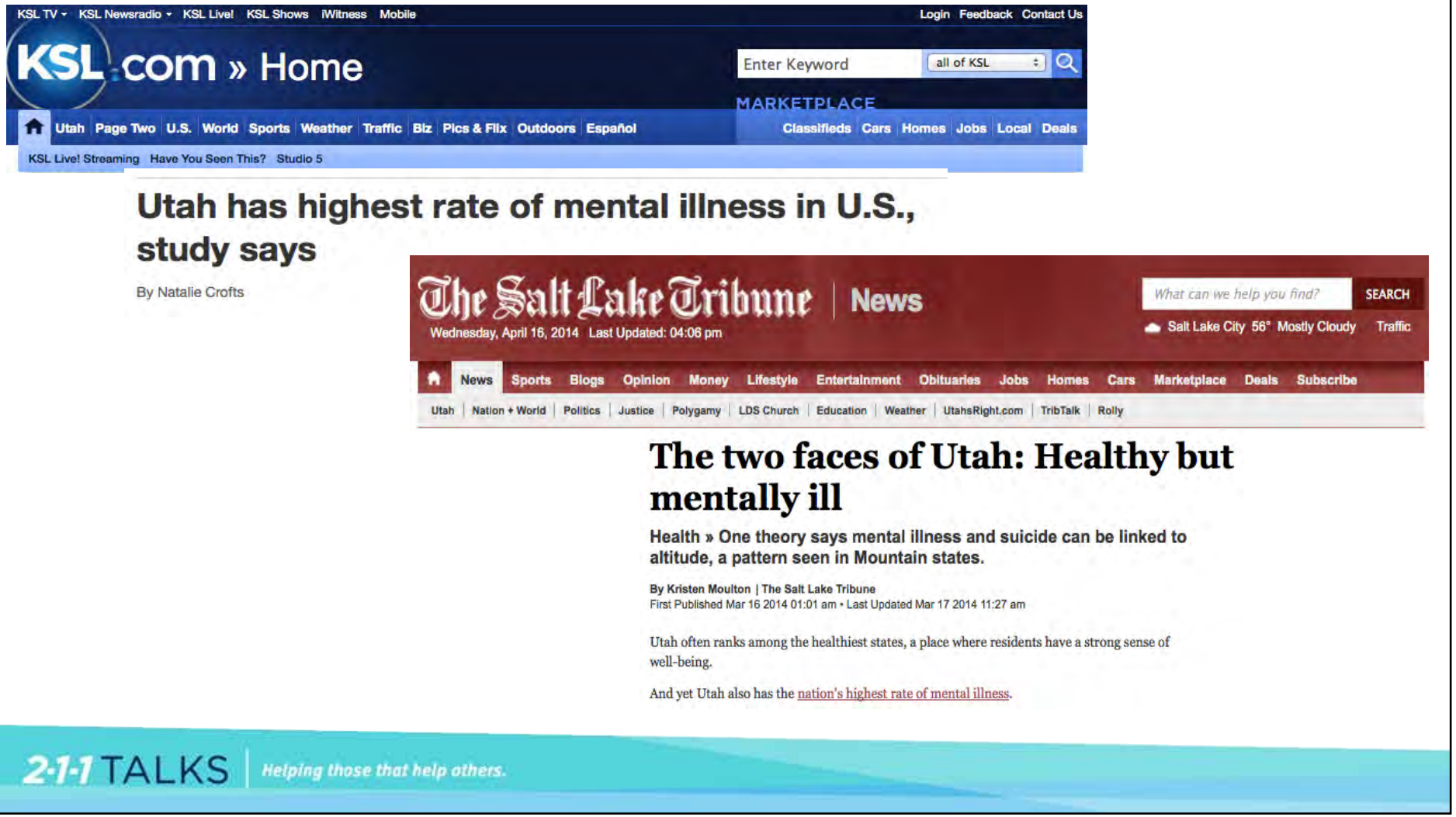
Prepared by the Thomson Corporation (now Thomson-Reuters)

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Surveillance Summaries / Vol. 60 / No. 13
October 21, 2011

# Suicidal Thoughts and Behaviors Among Adults Aged ≥18 Years — United States, 2008–2009

Results show:

- The prevalence of serious suicidal thoughts, suicide planning, and suicide attempts was significantly higher among young adults aged 18–29 years than it was among adults 30 years old and older.
- An estimated 8.3 million (annual average) adults (3.7% of the adult U.S. population) reported having serious thoughts of suicide in the past year, ranging from 2.1% in Georgia to 6.8% in Utah.
- More than 2.2 million adults (1.0% of adults) reported making suicide plans in the past year, ranging from 0.1% in Georgia to 2.8% in Rhode Island.
- More than 1 million adults (0.5% of adults) reported attempting suicide in the past year, ranging from 0.1% in Delaware and Georgia to 1.5% in Rhode Island.


KSL TV KSL Newsradio KSL Live! KSL Shows iWitness Mobile
Login Feedback Contact Us
KSL.com » Home
Enter Keyword
all of KSL
MARKETPLACE
Utah Page Two U.S. World Sports Weather Traffic Biz Pics & Flix Outdoors Español
Classifieds Cars Homes Jobs Local Deals
KSL Live! Streaming Have You Seen This? Studio 5
Utah has highest rate of mental illness in U.S., study says
By Natalie Crofts
The Salt Lake Tribune | News
What can we help you find?
SEARCH
Wednesday, April 16, 2014 Last Updated: 04:06 pm
Salt Lake City 56° Mostly Cloudy
Traffic
News Sports Blogs Opinion Money Lifestyle Entertainment Obituaries Jobs Homes Cars Marketplace Deals Subscribe
Utah | Nation + World | Politics | Justice | Polygamy | LDS Church | Education | Weather | UtahsRight.com | TribTalk | Rolly
The two faces of Utah: Healthy but mentally ill
Health » One theory says mental illness and suicide can be linked to altitude, a pattern seen in Mountain states.
By Kristen Moulton | The Salt Lake Tribune
First Published Mar 16 2014 01:01 am • Last Updated Mar 17 2014 11:27 am
Utah often ranks among the healthiest states, a place where residents have a strong sense of well-being.
And yet Utah also has the nation's highest rate of mental illness.
2-1-1 TALKS
Helping those that help others.

UTAH DEPARTMENT OF HEALTH

**Utah Health Status Update:**

*CDC Investigation Shows Youth Suicides in Utah Increasing*

Special Edition 4 *(December 2017)*

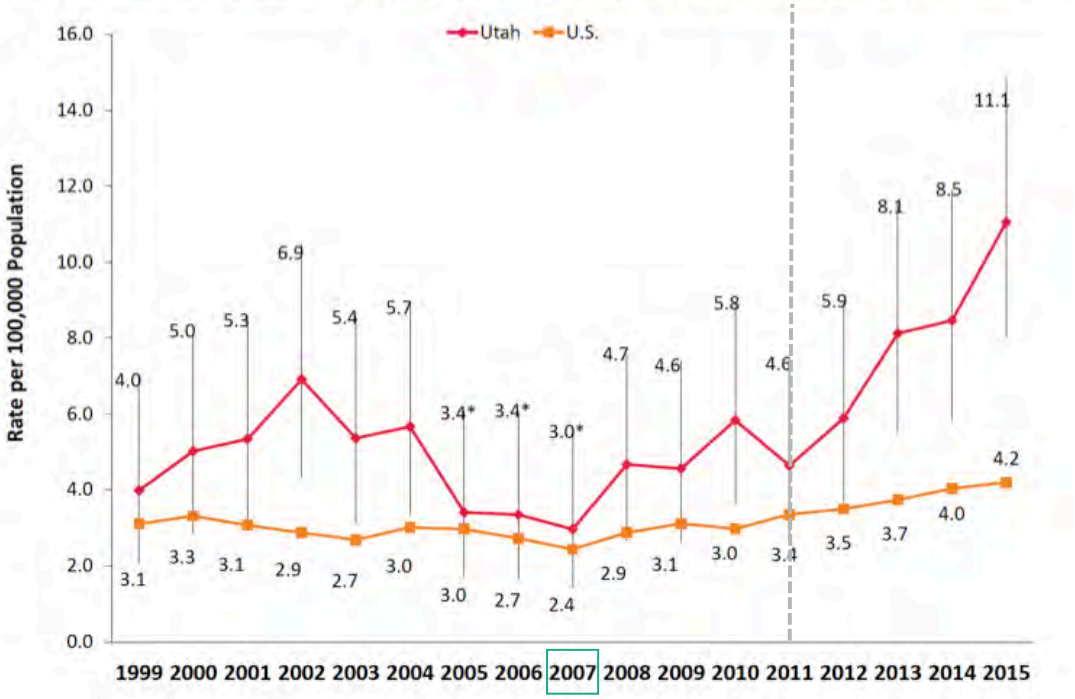
**Among 10-17 year olds in Utah, the suicide rate increased by 141.3% between 2011 and 2015.**

From 4.6 per 100,000 population in 2011…

…to 11.1 per 100,000 population in 2015.

## Youth Suicide Trends

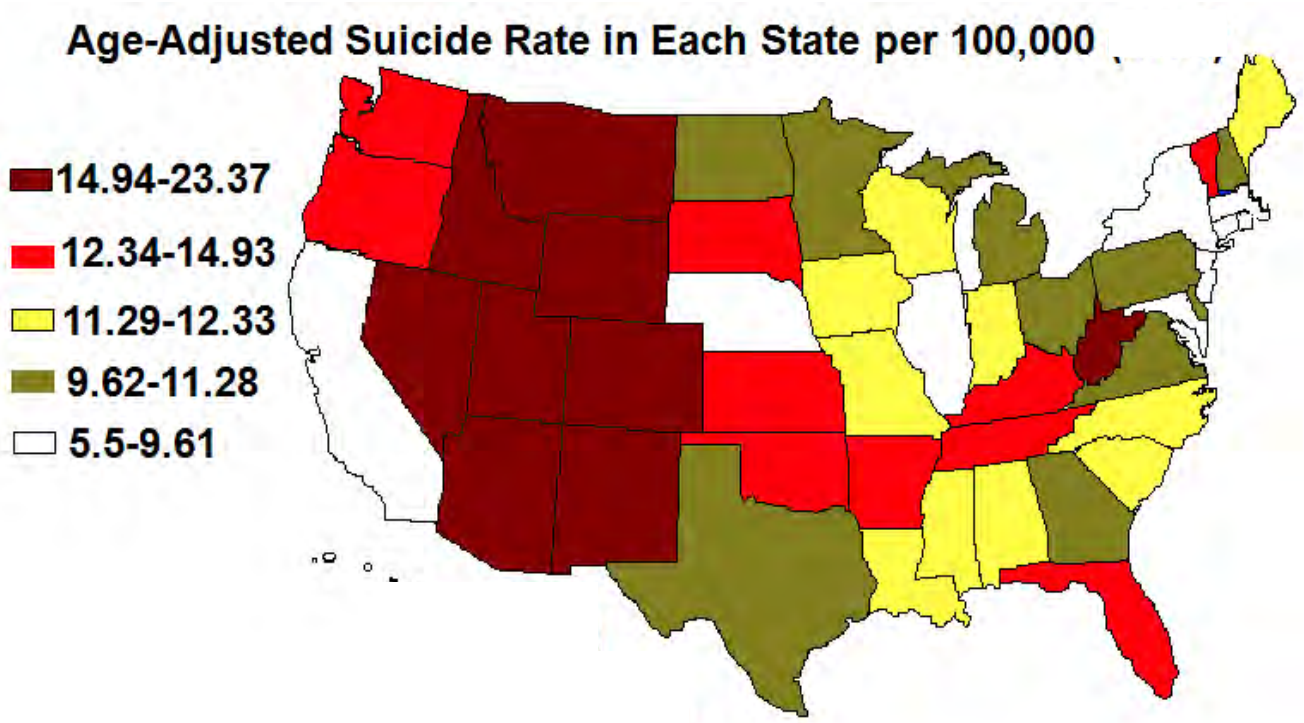
*Figure 1.* Rate of suicides by year, youth aged 10–17, Utah and U.S., 1999–2015



The Salt Lake Tribune

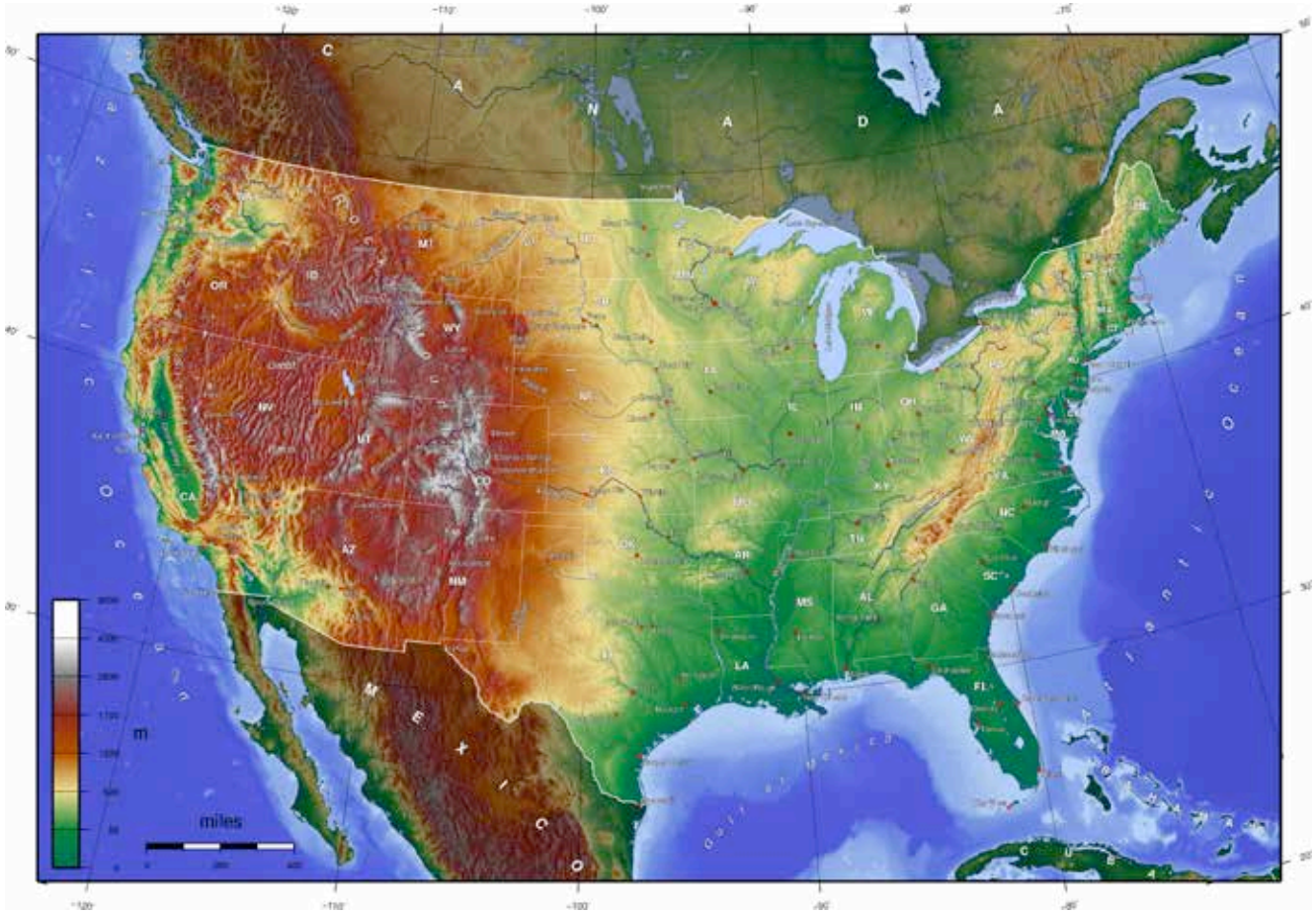
By Julia Lyon

## Utah has one of the highest suicide rates in nation




2-1-1 TALKS

# TOPOGRAPHICAL MAP OF THE UNITED STATES



# WHAT ARE THE EFFECTS OF ALTITUDE?

# Altitude's Effect on Barometric Pressure, Partial Pressure of Oxygen, and Equivalent Oxygen Concentration at Sea Level ($FiO_2$)

| Altitude (Meters) | Altitude (Feet) | Barometric Pressure ($P_B$) | Partial Pressure of Oxygen ($PiO_2$) | Equivalent $O_2$ Concentration at Sea Level ($FiO_2$) | Decrease In $FiO_2$ |
|---|---|---|---|---|---|
| Sea Level | Sea Level | 759.6 | 149.1 | 0.209 | 0% |
| 1,000 | 3,281 | 678.7 | 132.2 | 0.185 | 12% |
| 1,219 | 4,000 | 661.8 | 128.7 | 0.180 | 14% |
| 1,500 | 4,921 | 640.8 | 124.3 | 0.174 | 16% |
| 1,524 | 5,000 | 639.0 | 123.9 | 0.174 | 17% |
| 1,829 | 6,000 | 616.7 | 119.2 | 0.167 | 20% |
| 2,000 | 6,562 | 604.5 | 116.7 | 0.164 | 22% |
| 2,134 | 7,000 | 595.1 | 114.7 | 0.161 | 23% |
| 2,438 | 8,000 | 574.1 | 110.3 | 0.155 | 26% |
| 8,839 | 29,000 | 253.0 | 43.1 | 0.060 | 71% |

*Source*: Auerbach P.S., Wilderness Medicine 5th Edition (2007)

# ALTITUDE and BLOOD OXYGEN CONTENT in HEALTHY ADULTS

## Arterial Blood Gas Reference Values for Sea Level and an Altitude of 1,400 Meters

ROBERT O. CRAPO, ROBERT L. JENSEN, MATHEW HEGEWALD, and DONALD P. TASHKIN

Division of Respiratory, Critical Care, and Occupational Pulmonary Medicine, University of Utah, Division of Pulmonary and Critical Care Medicine, LDS Hospital, Salt Lake City, Utah; and Department of Medicine, Division of Pulmonary and Critical Care Medicine, UCLA School of Medicine, Los Angeles, California

TABLE 4

$Pa_{O_2}$, $Sa_{O_2}$, AND $AaPo_2$ BY ALTITUDE AND AGE GROUP

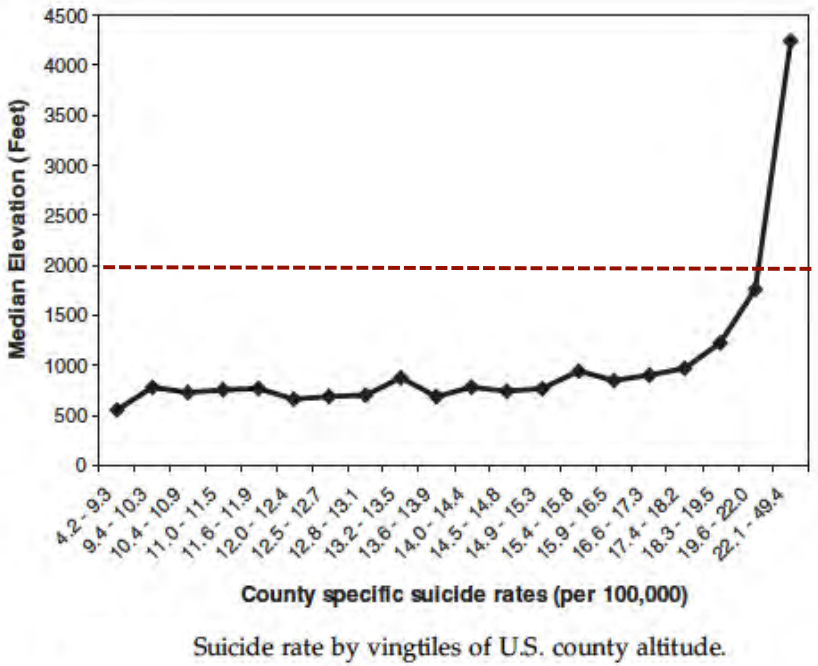
| | | Sea Level (CA) | | | | 1,400 Meters (UT) | | |
|---|---|---|---|---|---|---|---|---|
| Age (yr) | n | $Pa_{O_2}$ (mm Hg) | $Sa_{O_2}$ (%) | $AaPo_2$ (mm Hg) | n | $Pa_{O_2}$ (mm Hg) | $Sa_{O_2}$ (%) | $AaPo_2$ (mm Hg) |
| 18–24 | 17 | 99.9 (5.3) | 96.9 (0.4) | 2.0 (5.7) | | | | |
| 25–34 | 19 | 99.8 (4.9) | 96.7 (0.7) | 3.3 (4.3) | 57 | 79.2 (4.1) | 95.4 (0.6) | 6.1 (4.2) |
| 35–44 | 22 | 98.3 (7.6) | 96.7 (0.6) | 4.7 (7.5) | 48 | 77.5 (4.4) | 95.3 (0.7) | 7.9 (5.1) |
| 45–54 | 8 | 97.0 (8.0) | 96.5 (1.0) | 6.5 (6.4) | 48 | 75.0 (5.1) | 94.8 (0.8) | 10.5 (5.0) |
| 55–64 | 8 | 90.2 (4.5) | 95.9 (0.7) | 12.1 (3.7) | 42 | 71.0 (5.7) | 94.0 (1.2) | 13.4 (5.7) |
| > 64 | 22 | 88.7 (10.7) | 95.5 (1.4) | 14.8 (8.8) | 48 | 70.8 (4.9) | 94.0 (1.0) | 14.1 (4.9) |

* Values are means with SD shown in parentheses.

# U.S. Suicide Rate vs. Altitude

Positive association between altitude and suicide in 2,584 U.S. counties.

***High Altitude Medicine & Biology 2011;12(1):31-5.***

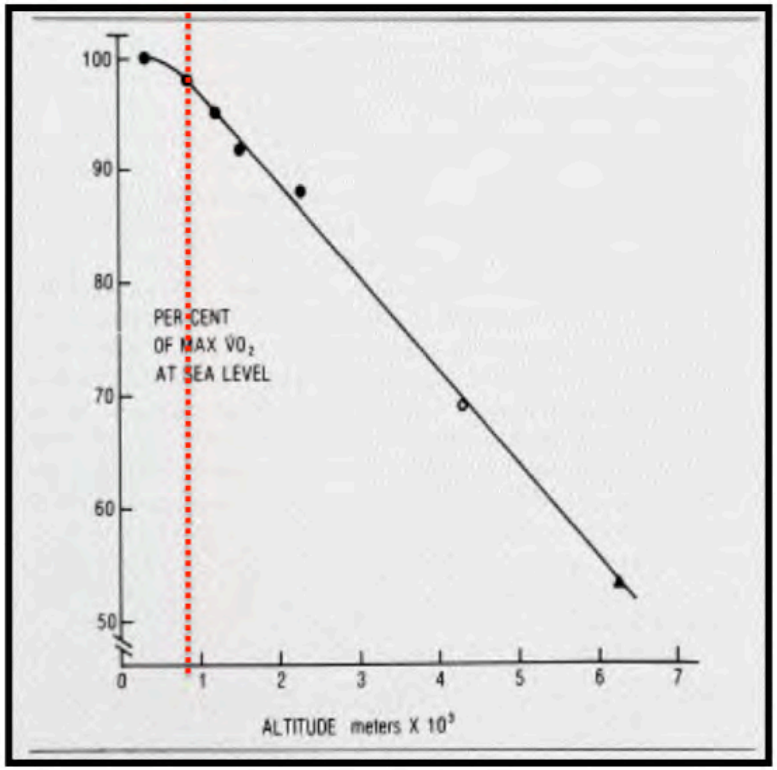



Suicide rate by vingtiles of U.S. county altitude.

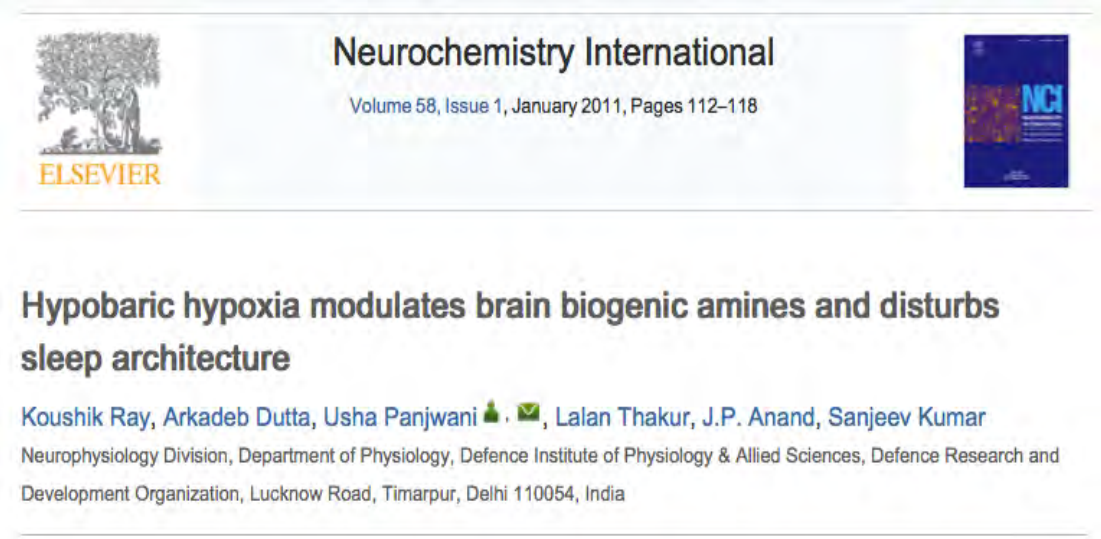
N.B. this is despite a negative correlation (r=10.31; $p < 0.001$) between county altitude and all-cause mortality.

## Starting at an Altitude of 700 meters, $VO_2$ Max Declines by 8% Every 1,000 m

**Cardiovascular adaptation to exercise at high altitude.**
***Exercise and Sport Sciences Reviews* 1986;14(1):269-302.**



# “Hypobaric Hypoxia” Alters Brain Chemistry in Animal Studies



Neurochemistry International

Volume 58, Issue 1, January 2011, Pages 112–118

## Hypobaric hypoxia modulates brain biogenic amines and disturbs sleep architecture

Koushik Ray, Arkadeb Dutta, Usha Panjwani, Lalan Thakur, J.P. Anand, Sanjeev Kumar

Neurophysiology Division, Department of Physiology, Defence Institute of Physiology & Allied Sciences, Defence Research and Development Organization, Lucknow Road, Timarpur, Delhi 110054, India

↑ Dopamine

↓ Serotonin

# Suicide Rate vs. County Altitude in the United States (1979-1998)

Article

## Altitude, Gun Ownership, Rural Areas, and Suicide

Namkug Kim, Ph.D.

Jennie B. Mickelson, B.S.

Barry E. Brenner, M.D., Ph.D.

Charlotte A. Haws, B.S.

Deborah A. Yurgelun-Todd, Ph.D.

Perry F. Renshaw, M.D., Ph.D.

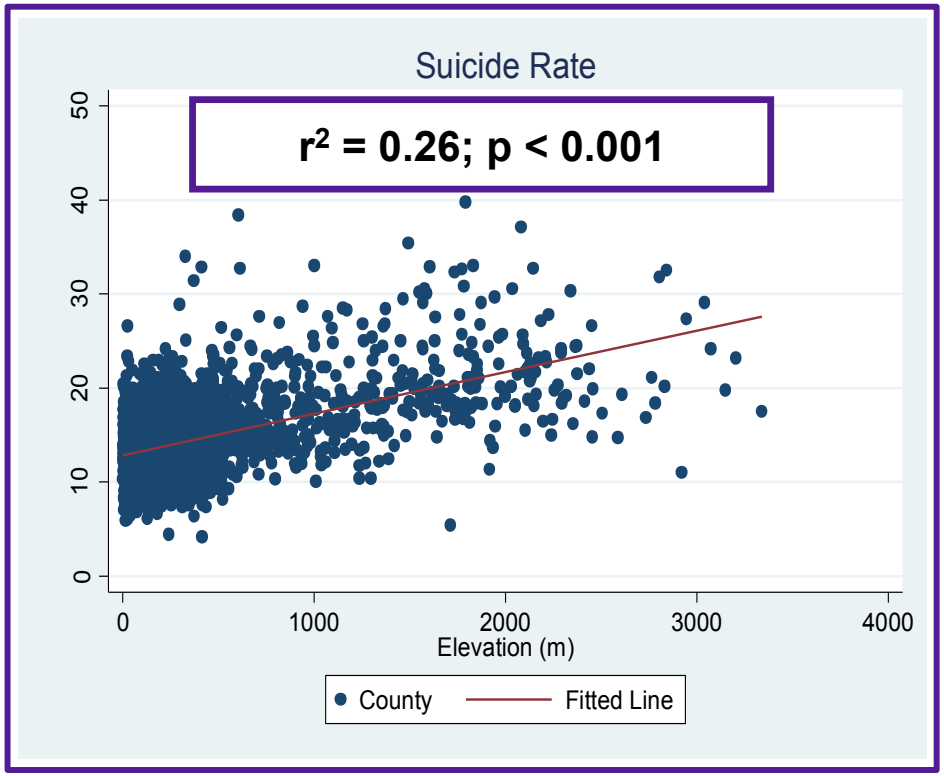
**Objective:** The authors recently observed a correlation between state altitude and suicide rate in the United States, which could be explained by higher rates of gun ownership and lower population density in the intermountain West. The present study evaluated the relationship between mean county and state altitude in the United States and total age-adjusted suicide rates, firearm-related suicide rates, and non-firearm-related suicide rates. The authors hypothesized that altitude would be significantly associated with suicide rate.

**Method:** Elevation data were calculated with an approximate spatial resolution of 0.5 km, using zonal statistics on data sets compiled from the National Geospatial-Intelligence Agency and the National Aeronautics and Space Administration. Suicide and population density data were obtained through the Centers for Disease Control and Prevention (CDC) WONDER database. Gun ownership data were obtained through the CDC's Behavioral Risk Factor Surveillance System.

**Results:** A significant positive correlation was observed between age-adjusted suicide rate and county elevation ($r=0.51$). Firearm ($r=0.41$) and non-firearm suicide rates ($r=0.32$) were also positively correlated with mean county elevation.

**Conclusions:** When altitude, gun ownership, and population density are considered as predictor variables for suicide rates on a state basis, altitude appears to be a significant independent risk factor. This association may be related to the effects of metabolic stress associated with mild hypoxia in individuals with mood disorders.

*(Am J Psychiatry 2011; 168:49–54)*

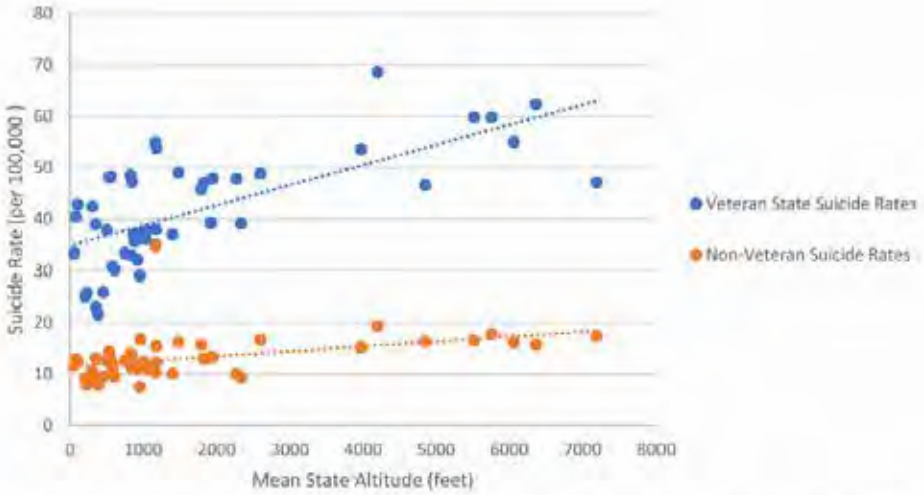



Source: *American Journal of Psychiatry* 2011;168(1):49-54.

HIGH ALTITUDE MEDICINE & BIOLOGY
Volume 20, Number 2, 2019
Mary Ann Liebert, Inc.
DOI: 10.1089/ham.2018.0130

# Effect of Altitude on Veteran Suicide Rates

Hana Sabic,[1] Brent Kious,[2] Danielle Boxer,[1] Colleen Fitzgerald,[1] Colin Riley,[1] Lindsay Scholl,[1] Erin McGlade,[1-3] Deborah Yurgelun-Todd,[1-3] Perry F. Renshaw,[1-3] and Douglas G. Kondo[1,2]




Scatterplot of veteran and nonveteran suicide rates and mean altitude in the contiguous U.S. states.

# The Association Between Altitude and VA Opioid Prescribing Rates

**Fitzgerald CE[1], Kious, BM[1], Boxer DJ[1], Renshaw PF[1,2], Kondo DG[1,2]**

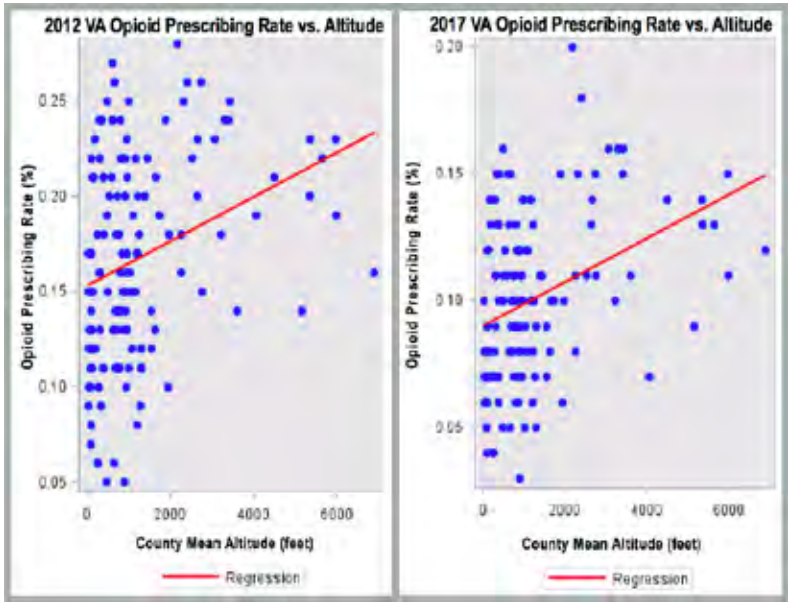
*[1]Diagnostic Neuroimaging, Department of Psychiatry, University of Utah, Salt Lake City, UT, USA;*

*[2]Salt Lake City VA Medical Center, Salt Lake City, UT, USA*

Standardized Correlation Coefficients (β Coefficients) for annual VA facility opioid recipient rates (percentage of all veterans at the facility who received any prescription who received an opioid prescription)

| Measure | 2012 Opioid Prescribing Rate | 2017 Opioid Prescribing Rate |
|---|---|---|
| Adjusted $R^2$ | 0.35 | 0.32 |
| County mean altitude | 0.441** | 0.446** |
| Excess drinking rate | -0.243* | NS |
| County median income | NS | NS |
| Mentally unhealthy days | NS | NS |
| YPLL | NS | 0.478* |
| % Obese | 0.338* | NS |
| % Smokers | NS | -0.410* |
| Physically unhealthy days | NS | 0.495* |
| % with fair/poor health | NS | NS |
| % Some college | 0.433* | NS |
| % High school graduates | NS | NS |
| Unemployment rate | 0.270* | NS |

*Only significant values reported, * $p < 0.05$; ** $p < 0.0001$*



# Association between altitude, prescription opioid misuse, and fatal overdoses

Hendrik J. Ombach[a,*], Lindsay S. Scholl[a], Amanda V. Bakian[a], Kai T. Renshaw[a], Young-Hoon Sung[a], Perry F. Renshaw[a,b,c,d], Shami Kanekar[a,c]

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[b] Utah Science Technology and Research (USTAR) Initiative, Salt Lake City, UT, 84108, United States
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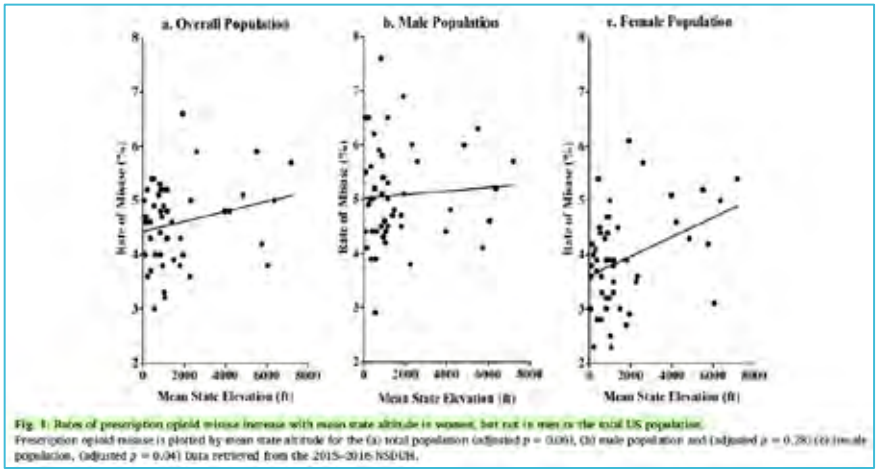



Fig. 1. Rates of prescription opioid misuse increase with mean state altitude in women, but not in men or the total US population.
Prescription opioid misuse is plotted by mean state altitude for the (a) total population (adjusted $p = 0.06$), (b) male population and (adjusted $p = 0.28$) (c) female population, (adjusted $p = 0.04$) Data retrieved from the 2015–2016 NSDUH.

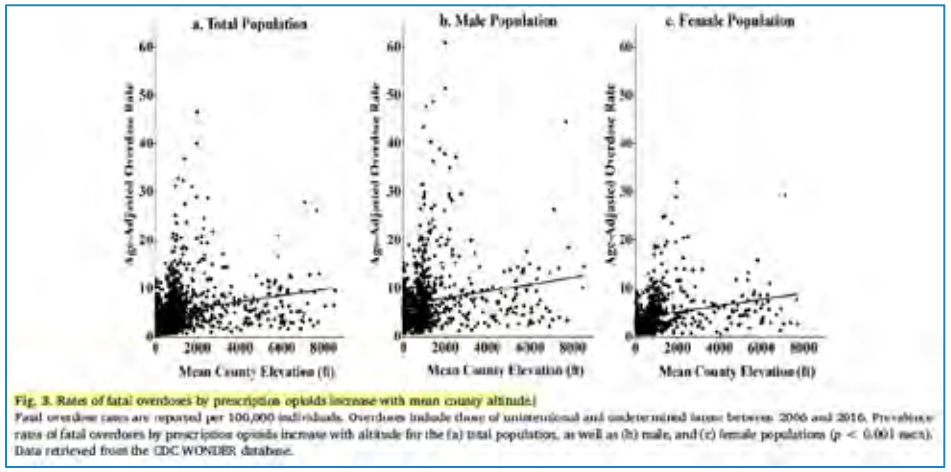
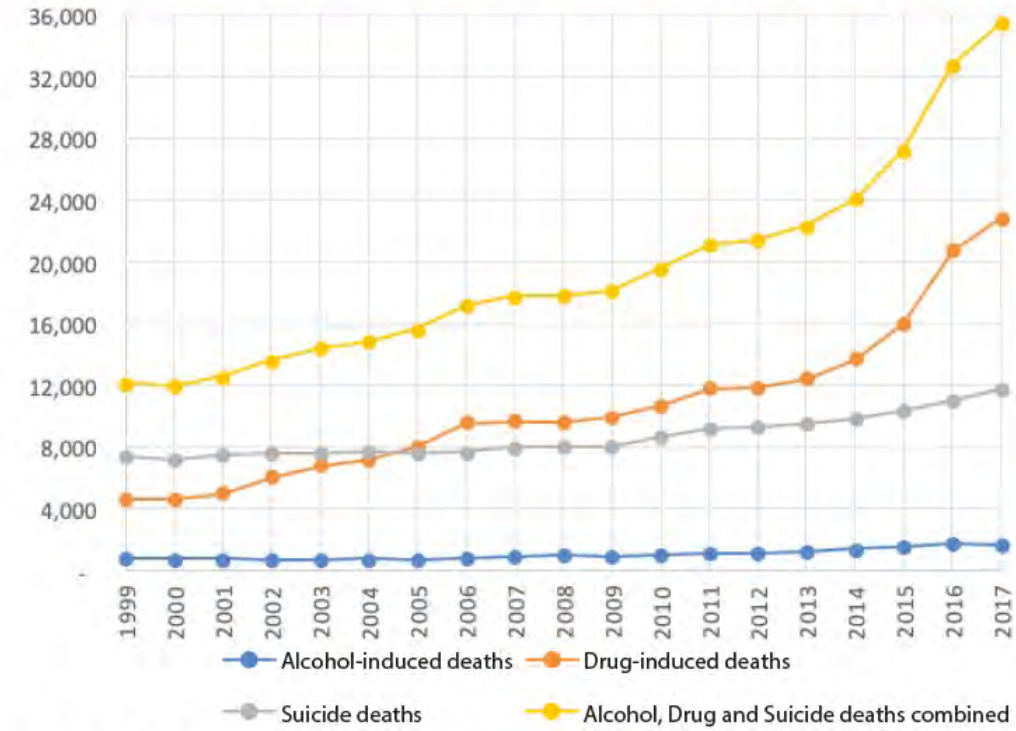



Fig. 3. Rates of fatal overdoses by prescription opioids increase with mean county altitude.
Fatal overdose rates are reported per 100,000 individuals. Overdoses include those of unintentional and undetermined intent between 2006 and 2016. Prevalence rates of fatal overdoses by prescription opioids increase with altitude for the (a) total population, as well as (b) male, and (c) female populations ($p < 0.001$ each). Data retrieved from the CDC WONDER database.

## Alcohol, Drug, and Suicide Deaths Among Young Adults: Ages 20–34, 1999–2017




*SOURCE: Trust for America's Health and Well Being Trust analysis of National Center for Health Statistics data, CDC.*[9]

Trust for America's Health
WWW.TFAH.ORG

PAIN IN THE NATION | DOWNLOAD REPORT | NATIONAL RESILIENCE STRATEGY

Trust for America's Health TFAH.ORG | WELL BEING TRUST

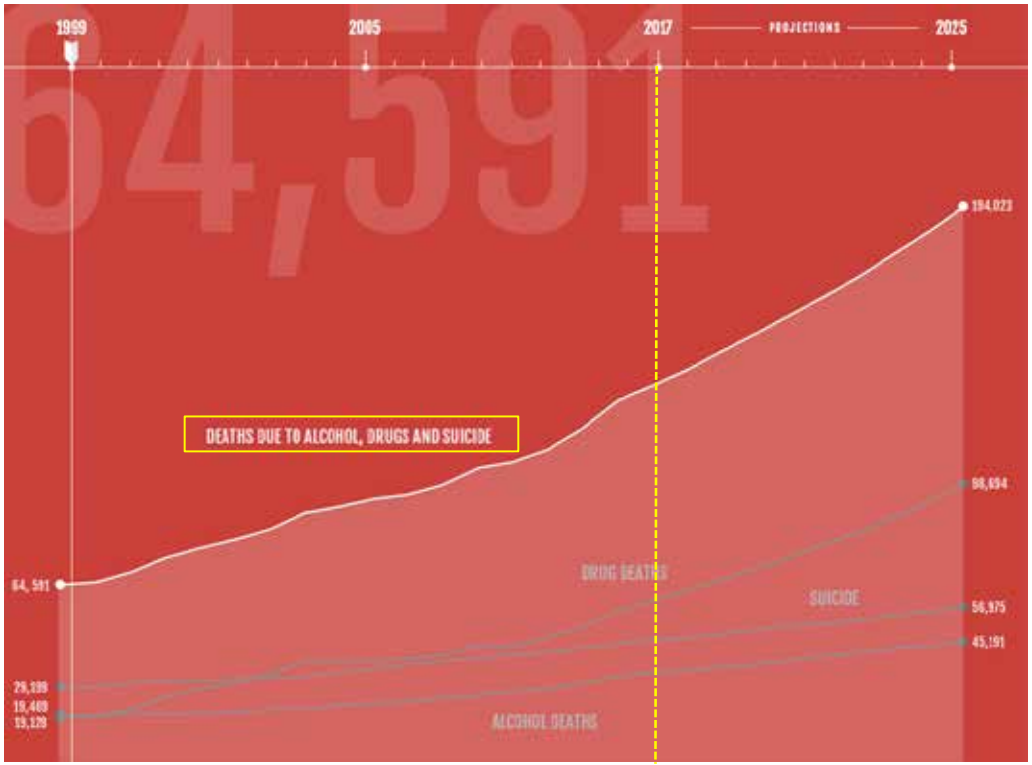
# WE ARE KILLING OURSELVES

## THE PROBLEM

In 2017, 151,800 Americans died from drug- or alcohol-induced causes or suicide. That is 416 deaths per day, 17 per hour, and one person dying of a preventable cause every three and a half minutes. Projections say it will only get worse.

## THE ROAD AHEAD

But there are solutions if we choose to act. A full-scale **National Resilience Strategy** can move us in the right direction.



2-1-1 TALKS


# Suicide Prevention Initiatives In Utah

2-1-1 Utah
United Way

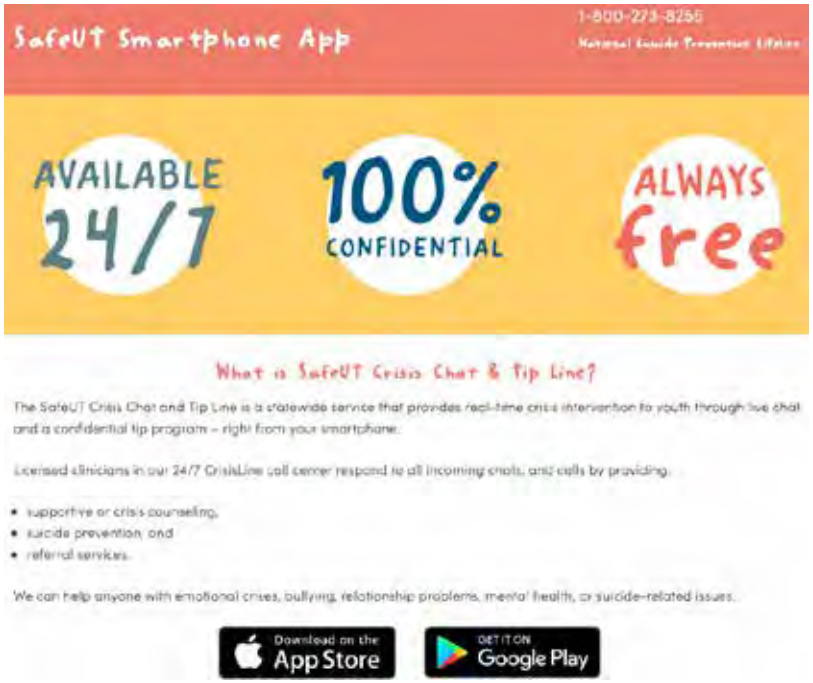
SECTIONS

Deseret News Utah

# Utah governor assembles team to tackle surge in teen suicides

Comments

# The SafeUT Smartphone App


https://healthcare.utah.edu/uni/programs/safe-ut-smartphone-app/

HOPE 4 UTAH

The Provo Story | Community Prevention Model | What Are Hope Squads? | Resources




Dr. Greg Hudnall

# HOPE4UTAH: RESEARCH EFFORTS

## Suicide Concern Reporting among Utah Youths Served by a School-Based Peer-to-Peer Prevention Program

*Jennifer Wright-Berryman, Greg Hudnall, Cathy Bledsoe, and Mary Lloyd*

To date, no suicide behavior data related to school-based peer suicide prevention programs have been published. The Hope Squad program uses trained students to intentionally facilitate help-seeking with distressed peers. Suicide concern contact data (SCCD) from school counseling centers were collected from 2013 to 2017 as part of routine outcome-based program evaluation. Hope Squad school SCCD were organized by student gender, grade, and Hope Squad referral and were cross-tabulated with types of suicide concerns and hospitalizations. Over 1,100 contacts ($N = 1,174$) across 65 schools in 41 school districts were included in the analysis. The highest rates of all suicide-related contacts were among girls and students in the eighth and ninth grades. Reported attempts peaked in the ninth and tenth grades, then reduced through the 12th grade. Nearly a quarter of all contacts were Hope Squad referrals. These descriptive data provide a general overview of the types and frequencies of Hope Squad school suicide concerns that present in school counseling centers and are not indicative of program effectiveness. Next steps will include a research study comparing outcomes between Hope Squad schools and non–Hope Squad schools, and a study examining implementation adherence using fidelity measures.

KEY WORDS: *adolescent mental health; Hope Squad; peer-to-peer suicide prevention; suicide behavior data*

# INTERMOUNTAIN HEALTHCARE (IHC) – "Zero Suicide" INITIATIVE

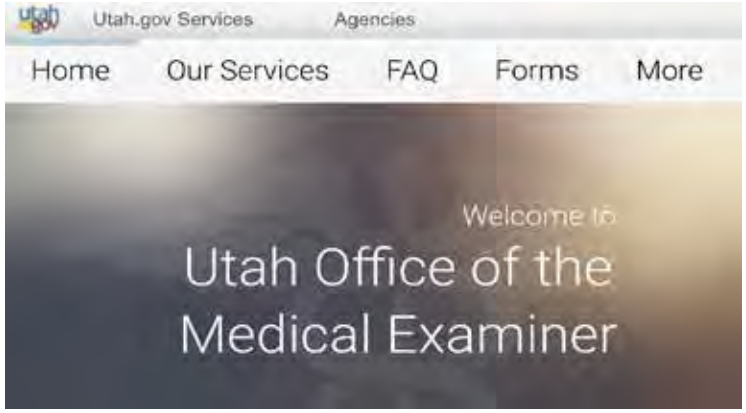
**Jessica Strong, MPH**
**Community Health & Outreach Manager**
**Primary Children's Medical Center**

**Dr. Morissa Sobelson**
**Intermountain Healthcare**
**Community Health Program Director**

ZERO Suicide
IN HEALTH AND BEHAVIORAL HEALTH CARE

Intermountain® Healthcare

# Psychological Autopsy – Utah OME (Office of the Medical Examiner)




Provided by a Bill Supported by:

Representative Steve Eliason (Sandy)
Senator Daniel Thatcher (West Valley)

(Trent Nelson | The Salt Lake Tribune)

Sociologist Michael Staley, PhD, has been hired to conduct psychological autopsies and other research on suicide in Utah. He'll talk to relatives and friends of those who have died, in an effort to understand Utah's rising suicide rates, and to design prevention programs. This position in the Utah Medical Examiner's office may be unique in the country.

Dr. Todd Grey

Utah Office of the Medical Examiner

(Retired)

# UTAH HEALTH DEPARTMENT – SUICIDE FATALITY REVIEW COMMITTEE

**State of Utah Suicide Prevention Coordinators**

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**Ms. Kim Myers, MSW**
**Division of Substance Abuse and Mental Health**

**Ms. Andrea Hood**
**Utah Health Department**

# University of Utah Department of Psychiatry | VA Salt Lake City Suicide Prevention Research Center


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U.S. Department of Veterans Affairs

## Clinical Research Trial for Male & Female Veterans with Suicidal Ideation

**What is the study about?**
- Uridine is a substance that naturally occurs within the body.
- Researchers are testing the investigational new drug Uridine as a treatment for Veterans with suicidal ideation.
- Magnetic resonance imaging and spectroscopy (MRI/MRS) brain scans will be performed to learn if Veterans taking Uridine have brain chemistry changes.

**Who can enroll in the study?**
- Veterans between the ages of 18-55 with Suicidal ideation
- Participants must not be enrolled in another clinical trial
- Participants must have a family, friend, or other contact person
- Female Veterans must not be pregnant, or breastfeeding

**What do I have to do if I am in the study?**
- Attend one screening visit to determine if you are eligible for the study
- If you are eligible, you will attend six visits over six weeks
  - Two of these visits will include MRI/MRS brain scans
- Participants will be required to have blood and urine lab testing, females will have pregnancy tests.

VA

***Compensation will be provided to study participants.***

**For more information**
801-587-1549
danielle.boxer@utah.edu

HEALTH UNIVERSITY OF UTAH

## VETERAN BIPOLAR RESEARCH STUDY

**What is the study about?**
Researchers are studying the differences in brain chemistry in Veterans with and without bipolar disorder, at different altitudes.

**Brain scans of Veterans with and without bipolar disorder will be compared, while the level of oxygen inside the MRI scanner is changed to simulate Sea Level and higher altitude.*

**Who can enroll in the study?**
- Participants must be diagnosed with bipolar disorder
- Participants must be between the ages of 18-65 years
- Resident of the Intermountain West for two months or more
- Have not traveled out of the Intermountain West region for two months prior to study entry
- No air travel within two months of study enrollment, or during study participation

**What do I have to do if I am in the study?**
- Participants will attend one screening visit and one brain scan visit
- Participants will be required to have testing for drugs of abuse and, if female, a pregnancy test

VA

*Compensation will be provided to study participants*

**For more information**
801-587-1549
danielle.boxer@utah.edu

HEALTH UNIVERSITY OF UTAH

# CURRENT RESEARCH STUDIES at VA SALT LAKE CITY

# Clinical Research Trial for Male & Female Veterans with Suicidal Ideation

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VA | U.S. Department of Veterans Affairs
VA Salt Lake City Health Care System

***Compensation will be provided to study participants.***

**For more information**

801-587-1549

danielle.boxer@utah.edu

HEALTH
UNIVERSITY OF UTAH

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VA | U.S. Department of Veterans Affairs
VA Salt Lake City Health Care System

***Compensation will be provided to study participants***

## For more information

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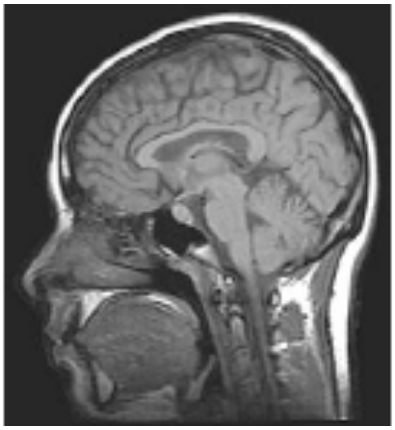
danielle.boxer@utah.edu

HEALTH
UNIVERSITY OF UTAH

# Recruiting Healthy Veterans for a Brain Scan Study



**What is the study about?**

The purpose of the study is to study the relationship between brain chemistry, altitude, and hypoxia in Veterans with bipolar disorder. Healthy control Veterans who do not have bipolar disorder, are needed for comparison.

**Who can enroll in the study?**

- Male and Female Veterans between the ages of 18-65 who are in good health.
- Participants must not have a current psychiatric or substance abuse disorder.
- Participants must not have claustrophobia (fear of enclosed spaces).

**What do I have to do if I am in the study?**

- Participants will have one MRI brain scan, and one detailed interview.

**COMPENSATION WILL BE PROVIDED TO STUDY PARTICIPANTS**

THE BRAIN INSTITUTE
THE UNIVERSITY OF UTAH

**For additional information:**

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