

Foreclosures and Economic Related Suicides: Current Analyses

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Violence Prevention Priorities

- Intimate Partner Violence
- Sexual Violence
- Youth Violence
- Suicide
- Child Maltreatment

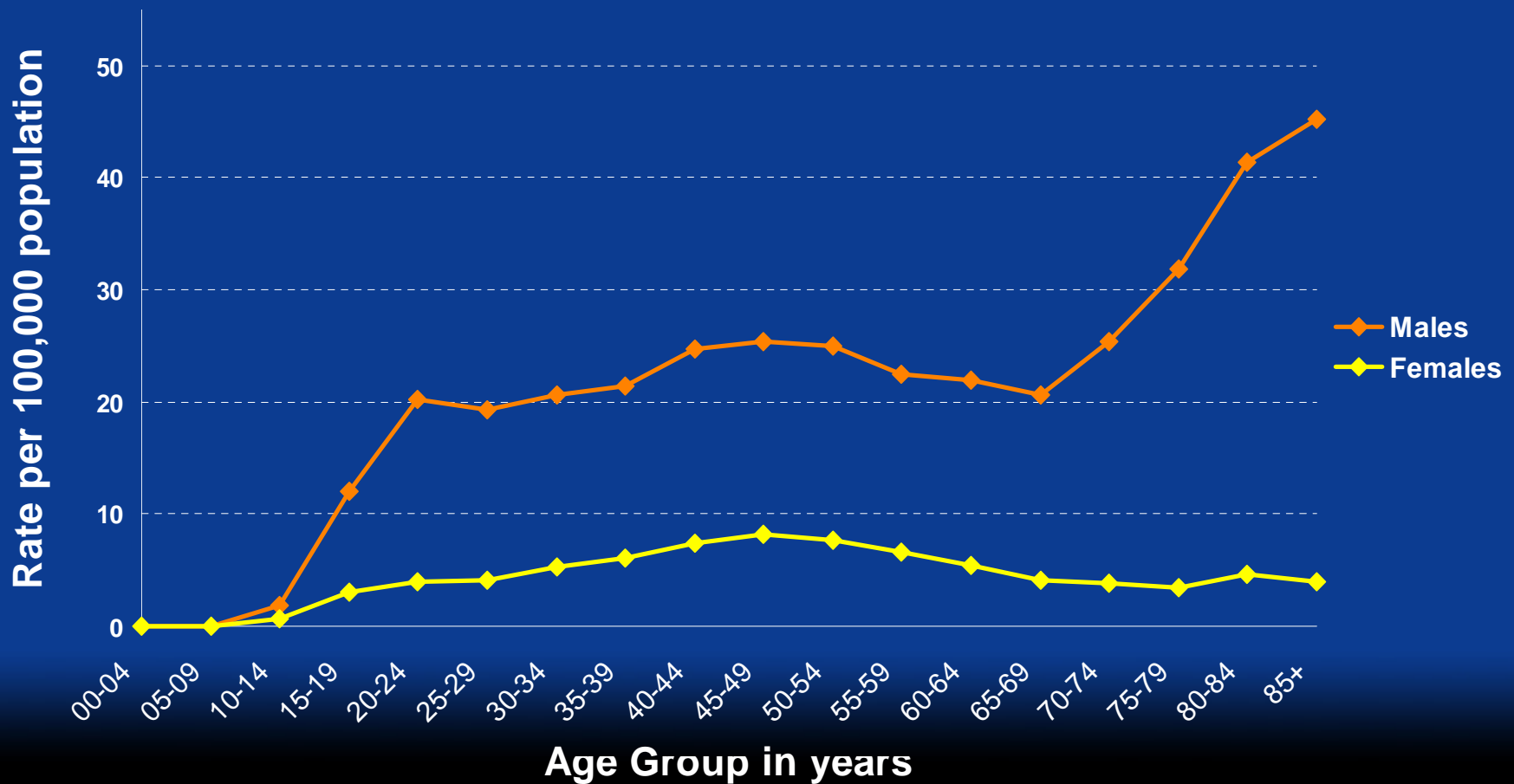


Leading causes of death by age groups – U.S., 2005

Rank	10-14 years	15-19 years	20-29 years	30-39 years	40-49 years	50-59 years
1	Unintentional Injuries	Unintentional Injuries	Unintentional Injuries	Unintentional Injuries	Malignant Neoplasms	Malignant Neoplasms
2	Malignant Neoplasms	Homicide	Homicide	Malignant Neoplasms	Heart Disease	Heart Disease
3	Suicide	Suicide	Suicide	Heart Disease	Unintentional Injuries	Unintentional Injuries
4	Homicide	Malignant Neoplasms	Malignant Neoplasms	Suicide	Suicide	Diabetes Mellitus
5	Congenital Malformations	Heart Disease	Heart Disease	Homicide	Liver Disease	Cerebro-vascular
6	Heart Disease	Congenital Malformations	HIV	HIV	HIV	Liver Disease
7	Chronic Lower Respiratory Ds	Cerebro-vascular	Congenital Malformations	Diabetes Mellitus	Cerebro-vascular	Chronic Lower Respiratory Ds
8	Influenza & pneumonia	Influenza and pneumonia	Diabetes mellitus	Cerebro-vascular	Diabetes Mellitus	Suicide

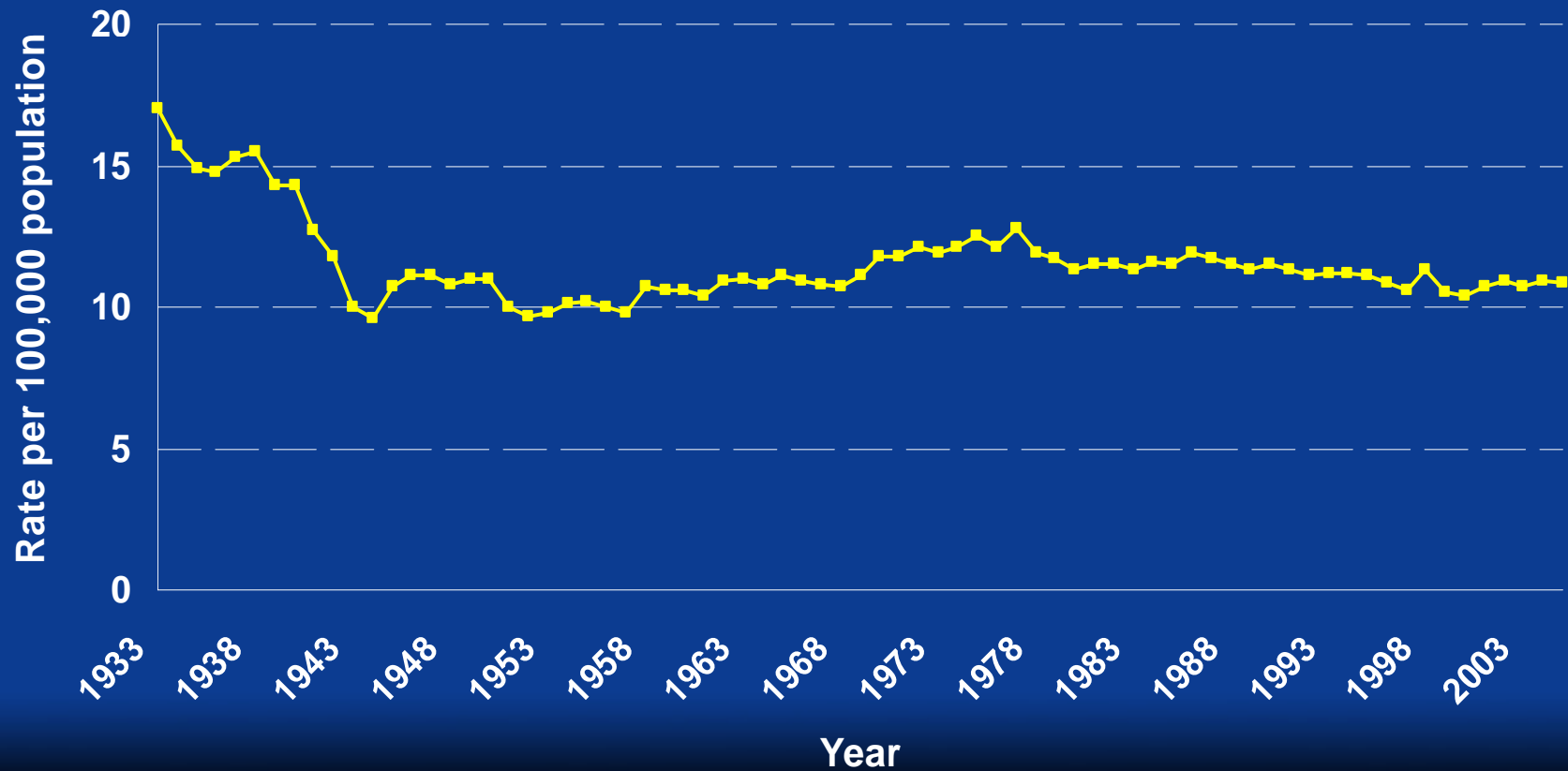
Source: CDC vital statistics

Suicide rates among all persons by age and sex--United States, 2005



Source: CDC vital statistics

Suicide among all persons -- United States, 1933-2005



Source: CDC vital statistics

Economic Factors and Suicide Risk

Economic
Circumstances



Suicide

Economic Factors and Suicide Risk

**Economic
Circumstances**



Suicide

Job loss

Bill collectors

Loss of retirement

Health insurance

Foreclosure

Eviction

Economic Factors and Suicide Risk

**Economic
Circumstances**

Family Stress, Despair, Shame

Suicide

Job loss

Bill collectors

Loss of retirement

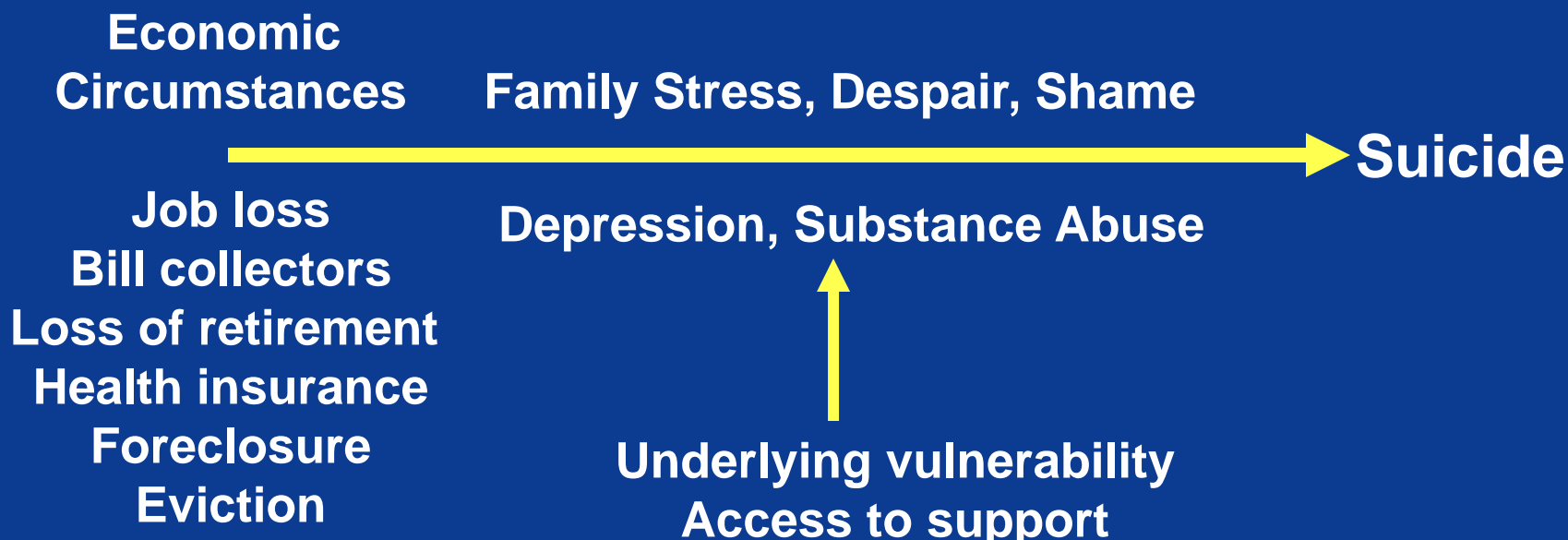
Health insurance

Foreclosure

Eviction

Depression, Substance Abuse

Economic Factors and Suicide Risk



Current Analyses: Example from Suicide

Sample Research Questions

- Matt Gladden, PhD

- Is there evidence that evictions/foreclosures precede suicides?
 - ◆ What is the incidence of these types of suicides?
- What other circumstances are associated with suicides preceded by eviction/foreclosure?
 - ◆ Most evictions/foreclosure do not result in suicide
 - ◆ Multiple factors contribute to suicide
 - ◆ What other circumstances will help us identify the most at-risk people?

National Violent Death Reporting System (NVDRS): 2003-2008

- 16 states and 4 counties in California
 - ◆ All states participating by 2005
- Four primary data sources
 - ◆ Coroner / Medical examiners (MEs)
 - ◆ Law enforcement
 - ◆ Death certificates
 - ◆ Toxicology and Forensic Labs
- Geographic information on state, city, and county
- Information: <http://cdc.gov/ncipc/profiles/nvdrs/>

Data Available in NVDRS

- Narratives of circumstances related to the event abstracted by state staff
 - ◆ Law enforcement narrative
 - ◆ Medical examiner/coroner narrative
- 21 circumstances
 - ◆ Mental health / Substance abuse
 - ◆ Interpersonal factors
 - ◆ Life stressors
 - ◆ Suicide event
- Availability of data
 - ◆ 6 months after end of year count of violent deaths
 - ◆ 18 months after end of year circumstance information

Analysis Strategy

- Case Definition
 - ◆ SAS 9.1 search tool identifies text strings related to eviction/foreclosure
 - ◆ Must involve an eviction/foreclosure from a home or institution
- Cases are then reviewed by a trained coder to verify it is a real case
 - ▼ Whether suicide is related to specific event such as notification of eviction/foreclosure

Sample Narratives

- Subject had been depressed and talking about suicide since he lost his job several months ago. According to friends subject was an alcoholic, suffered from depression, had lost his optometry practice, facing bankruptcy, and losing his house through foreclosure.
- He was due to be evicted from the home the day of the incident due to foreclosure. Victim's mother said he was very depressed about losing his home but had not been making any suicidal comments. She said he has lost his job several month earlier.

Progress

- SAS Program has identified 577 eviction/foreclosure cases
 - ◆ Review of small sample of cases reveal a high percent of cases are valid
 - ◆ Another 169 cases involve being “kicked out” of home
- Increases in cases from 2006 to 2007 even though 2007 data will not be complete until June, 2009

Next Steps

- Compare eviction/foreclosure suicides to all other suicides using
 - ◆ NVDRS circumstances as predictors
 - ◆ Use hierarchical linear modeling to account for clustering of data within state and county
 - ◆ Identify risk factors that occur more or less frequently in eviction/foreclosure suicides
- Compare eviction/foreclosure suicides to suicides where other financial problems were a contributing factor

Economic Factors and Suicide

- Previous research shows unemployment rates positively associated with suicide rates
- Limited controls for other economic factors
- DVP economists are studying other economic variables possibly associated with suicide
 - ◆ Bankruptcy
 - ◆ Foreclosure
 - ◆ High debt levels

Data Sources

- National Vital Statistics
 - ◆ Suicide rates
- Haver Analytics database (via the Atlanta Federal Reserve Bank)
 - ◆ Bankruptcy
 - ◆ Foreclosure
 - ◆ High debt levels

Using CDC BioSense Data to Assess the Impact of the U.S. Recession on Suicides

Research Questions

- Have suicide attempts and emergency room visits related to suicidal thoughts/ideation increased as a result of the U.S. recession?
 - ◆ How are suicide visits related to changes in foreclosures, employment, and business bankruptcies?
- Are certain communities more resistant or vulnerable to increases in suicide during difficult economic times?
 - ◆ Can at-risk communities be identified by other measures before the crisis?

BioSense: 2003-Present

BioSense is a national program that provides near real-time hospital surveillance data through the use of existing data from healthcare organizations.

- ◆ 581 Non-Federal Hospitals
- ◆ 368 Department of Defense (Ambulatory)
- ◆ 887 Veterans Affairs (Ambulatory)
- ◆ See <http://www.cdc.gov/biosense>

BioSense: 2003-Present

Non-Federal Hospitals supply:

- ◆ Patient class: Emergency Department (ED), inpatient, and outpatient data (ED data is the most common data type sent)
- ◆ Chief complaint (text provided)
- ◆ Final diagnosis from a subset of hospitals (text and ICD-9-CM codes)
- ◆ Demographics
- ◆ State, county, and zip code information
- ◆ Visit date information

Data Analysis Strategy

- Aggregate suicide attempts and suicidal thoughts by zip code and county
 - ◆ Identify areas where BioSense has full hospital coverage versus partial coverage
- Track trends in suicide indicators by zip code and county
 - ◆ Link with data tracking trends in economic indicators and other relevant data
- Use hierarchical linear modeling to see how community trends are related to trends in suicide visits

Longer Term Opportunities

- Extend project to measure emergency room visits due to assault and overdose
- Validate system to see if we can predict summer increases in crime rates